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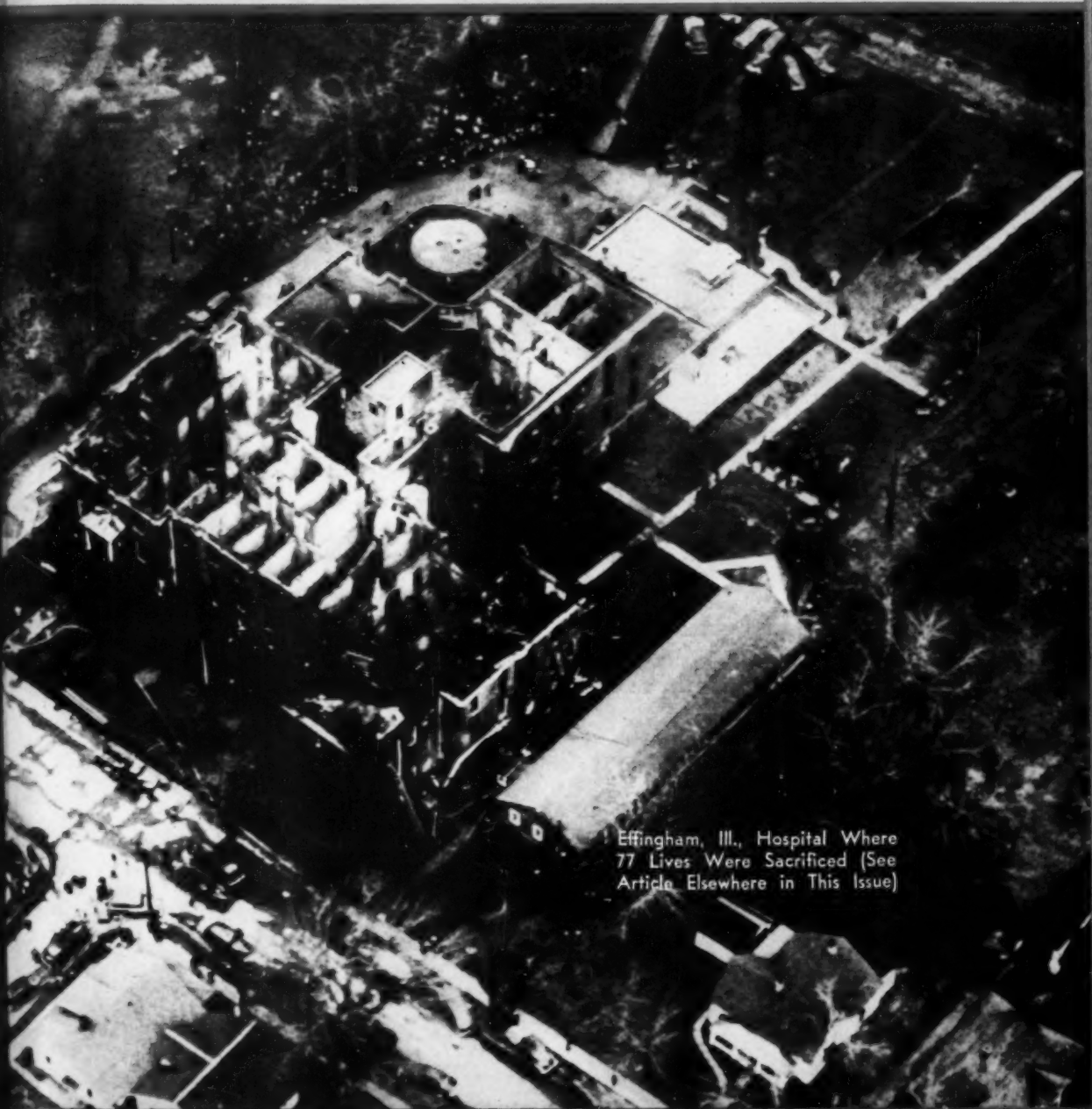
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

MAY, 1949



Effingham, Ill., Hospital Where 77 Lives Were Sacrificed (See Article Elsewhere in This Issue)

A CASE - SHEPPERD - MANN PUBLICATION

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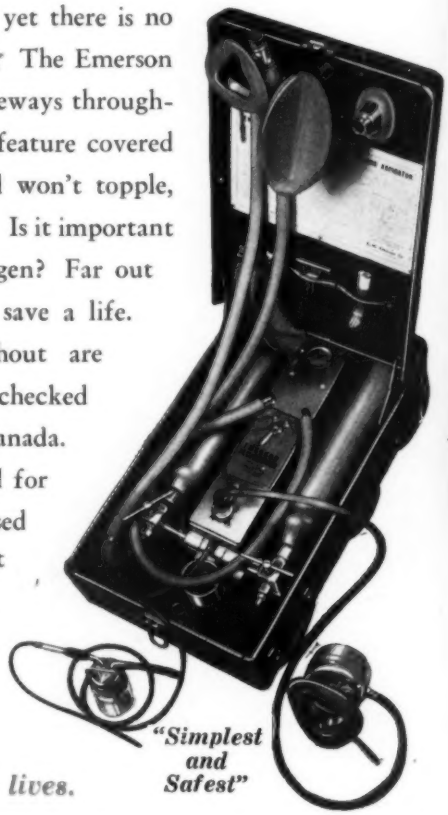

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Keeping Up The Pace!

SOMEBODY once said there's nothing as stale as yesterday's newspaper.

- What keeps a technical journal, as well as a newspaper alive and alert is the timeliness of its contents—editorial and advertising.
- The publishers of FIRE ENGINEERING strive not only to keep abreast of all developments in the world of fire protection and prevention—but to try to be ahead of developments—to anticipate them.
- For example: right now everybody's talking about the hazards of berrylium coated fluorescent tubes. FIRE ENGINEERING was the first to inform the fire service about this—two months ago.
- Such developments as motorized fire apparatus; water fog; fog foam; CO_2, dry powder and methyl bromide extinguishers; wetting agents; radio communications and so on, all were first explained in the editorial and advertising sections of FIRE ENGINEERING.
- Readers of this journal have become accustomed to "looking for it first in FIRE ENGINEERING". They may rest assured the publishers will continue to strive to justify that faith.

The Publishers

FIRE ENGINEERING

The Journal of the Fire Profession since 1877; published on the fifteenth of each month by Case-Shepperd-Mann Publishing Corp., 24 West 40th St., New York 18, N. Y., also publishers of *Water Works Engineering, Sewage Works Engineering*, etc. ¶Subscription price: U. S., Latin America and Canada, $3.00 a year; Foreign, $4.00; Single copies, 35c. ¶Member of Audit Bureau of Circulations and Associated Business Papers, Inc. ¶Entered as second-class matter April 15, 1929, at the Post Office at New York, N. Y., under Act of March 3, 1879.

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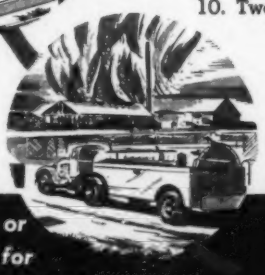

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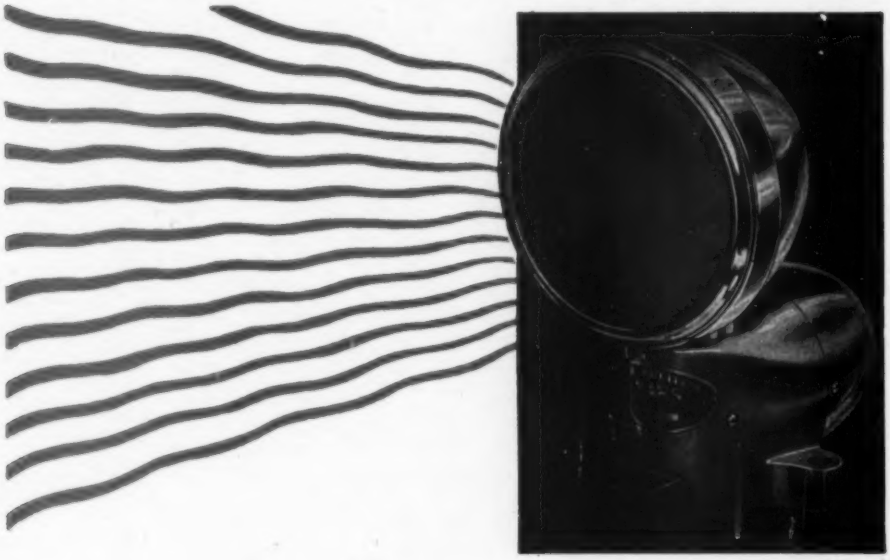

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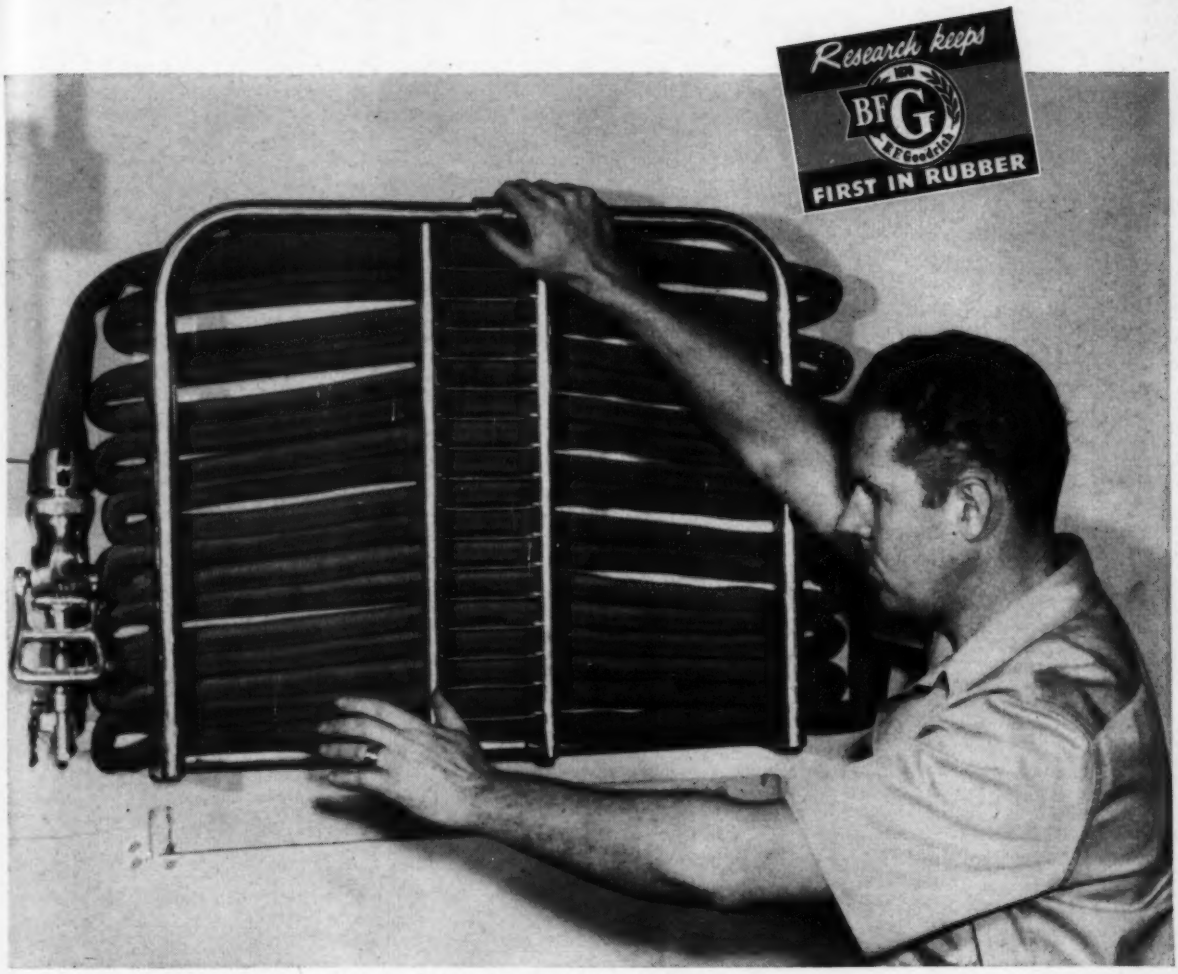

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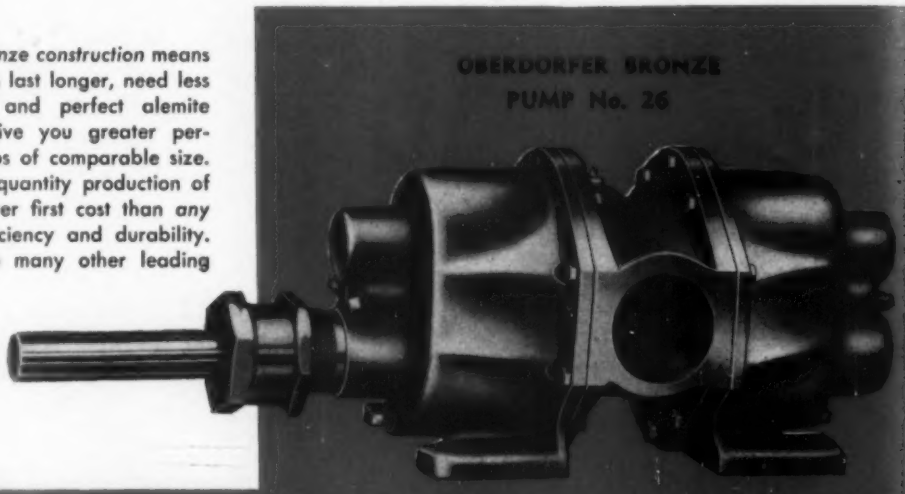

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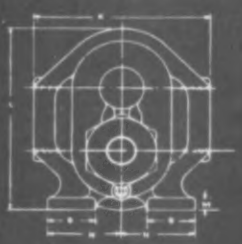

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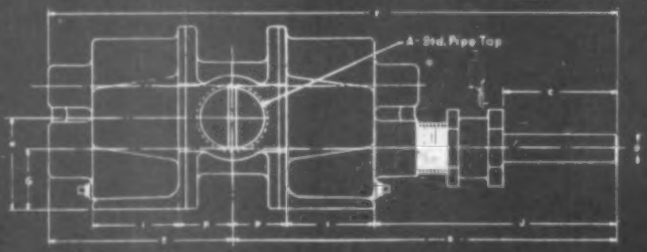

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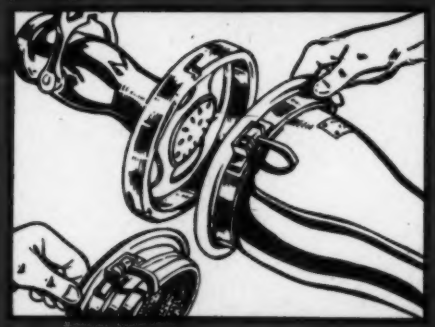

Rockwood's Type FFF Nozzles give you choice of three types of discharge: (1) FogFOAM, (2) Solid Foam Stream, or (3) High Velocity WaterFOG. Picture shows quick shift from FogFOAM Screen to Solid Foam Shaper on Rockwood Type FFF Nozzle.

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"We're really making fire fighting history around here," writes Paul Shiffer, chief of the Elizabethtown, Pa., fire department, "and plenty of credit goes to our John Bean High-Pressure Fog Fire Fighter."

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FOR OVER 22 YEARS

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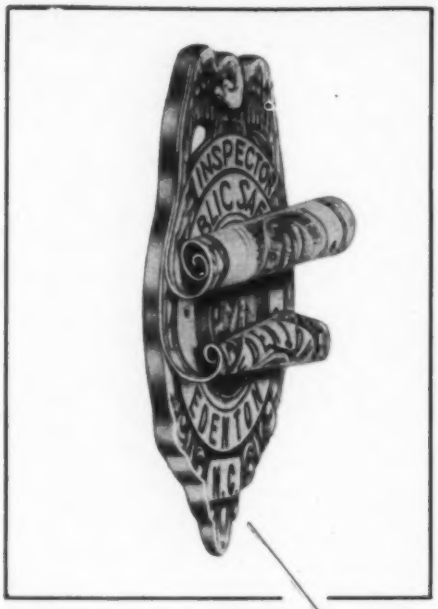

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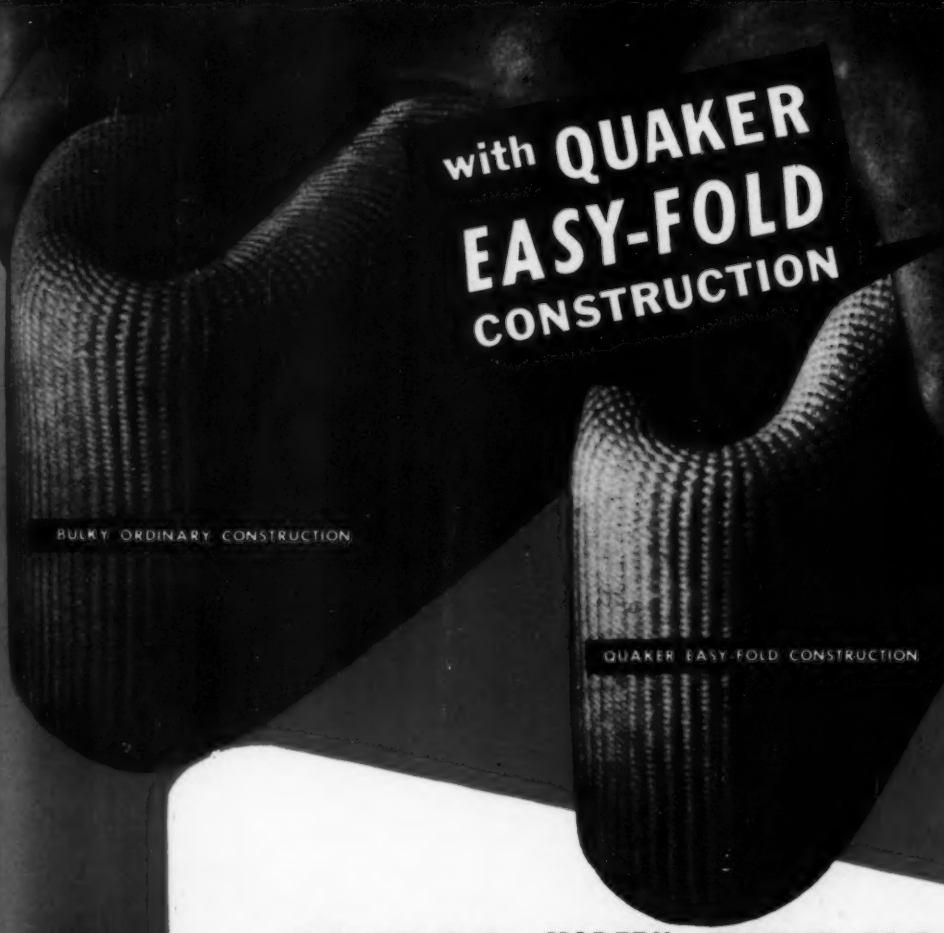

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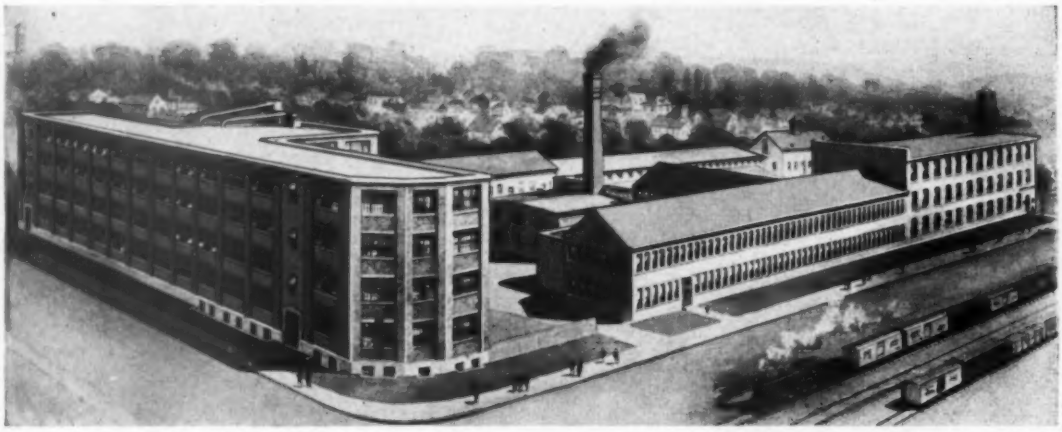

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FIRE ENGINEERING

MAY, 1949 VOL. 102, NO. 5

With the Editor

A Tragedy of Errors

Editors of this journal have repeatedly pointed out that conflagrations and large scale fire tragedies are rarely due to any one single cause, but rather are the outcome of a lot of unfortunate things that were wrong or went haywire.

Once more this belief has been confirmed, in the tragic story of the St. Anthony's Hospital fire in Effingham, told in this issue.

Any experienced fire chief, reading between the lines of this account, can hardly fail to agree with the author that here, once again, catastrophe was the outcome of not one, but rather a combination of errors, to use the word in its broadest sense.

Usually an outraged public selects the fire department as the brunt of its reactions following tragedies such as that at Effingham. It's so much easier to criticize the fire service *after* the cataclysm, than it is to heed its warnings of possible tragedy *beforehand* and take necessary steps to prevent it! Besides, the fire department that was called in to fight a losing battle from the start, in such a tragedy, can't pick up stakes after the ordeal and depart for places unknown. It's got to stay and face the criticism even though knowing full well that it did its best under the conditions.

The death warrant of those 77 occupants of St. Anthony's, 14 of them infants, was really written many years ago, when the old combustible structures were put on drawing paper—and later converted into brick, mortar, and plenty of flammable material. What happened is simply a duplication of other like catastrophes of varying degree and intensity, and of what is going to happen elsewhere with perhaps the same dramatic climax tomorrow, or the day after, unless the lessons taught by this holocaust are taken to heart and heeded.

We'd like to believe they will be heeded, but we doubt it.

Before the St. Anthony's Hospital fire, it is said that recommendations were made by the fire marshal's office for changes that would have at least prevented such a large scale disaster, if not entirely removing all possibilities of serious fire. Some of these recommendations had been adopted, such as modern, enclosed fire escape chutes and an enclosed elevator. But the unobstructed vertical openings, the open halls, wood lined laundry chutes and the old elevator shaft with its adjacent winding stairway and the combustible trim of the interior—these remained as ducts and fuel for the fire. Worse still, there appears to have been no program for evacuating patients in time of emergency, nor was there adequate personnel to meet the crisis. True, there was no lack of individual heroism on the part of the staff, some of whom died in the fruitless effort to save lives that never should have been subject to risk.

The fire protection provided by the community itself was even more inadequate to the task. An out-moded, inefficient fire alarm system; lack of modern fire fighting equipment (no ladder truck, no life net, no heavy duty appliances, limited pumping capacity) and shortage of trained fire fighters to cope with a real emergency—these and other handicaps had the Effingham Fire Department licked before it ever got to work, no matter how courageous its individual and collective membership.

The old St. Anthony's Hospital has been written off, together with the lives of 77 human beings. It should serve as a monument to a nation's criminal carelessness. A new institution is already planned, doubtless to be a model of its kind. It is to be hoped also that whether or not the new hospital will measure up to the fire safety factors laid down by fire protection engineers, the Effingham Fire Department also will come in for rejuvenation and modernization. And finally, that fire departments in hundreds of other municipalities in which there exist similar hospitals and institutions, ready to duplicate the Effingham tragedy, will take this example to heart and profit by its tragic lesson.

Fred. Sheppard

Hospital Holocaust Result of Combination of Many Errors

Failure to Provide Adequate Fire Protection Chief Contributing Factor in Fire That Claims 77 Lives in Effingham, Ill.

A SPECIAL REPORT TO FIRE ENGINEERING BY HENRY E. MARSCHALK*

Editor's Note: **Over a period of half a century the editors of this journal have had to study and record many catastrophic fires. As a group, none of these have so consistently spelled stark tragedy as those in the occupational classification of hospitals, nursing homes, homes for the aged, and the like.**

Of all types of occupancies where adequate fire protection and prevention should be paramount, it is in those classes of buildings occupied by the sick, the aged and the very young who, because of their condition, cannot readily seek safety in time of fire and who are dependent upon others for the safety they cannot provide for themselves.

When fire ravaged the St. Anthony's Hospital in Effingham the editors were inclined at first to treat this as just another "horrible example" of failure to institute fire safety measures that have been headlined after almost every such fire—and there have been many.

However, as the dramatic details of the Effingham holocaust were disclosed and the errors of omission and commission on the part of all concerned—hospital authorities, state and insurance agencies and local fire department and public—became a part of the cheerless record, it was realized that here is probably the most outstanding example in years of a failure all along the line to prepare for a fire that had been overdue for 72 years.

Fortunately, one of FIRE ENGINEERING's correspondents was near Effingham shortly after the fire and was able to spend many hours at the scene gathering the facts first hand. This is his account, minus certain data that could only result in unproductive controversy.

If this account appears to reflect adversely upon individual members of the Effingham or any other fire departments, who did their best under the circumstances, the editors are sorry but wish it known that their purpose in painting the entire dismal picture is so that these fire fighters will know, and we hope their civic governments will know, that individual courage cannot hope to offset the lack of essential facilities which every fire department must have if it is to live up to the expectations its local citizens—particularly those confined to hospitals and such institutions—have for it.

THE fire in St. Anthony's Hospital at Effingham, Illinois, which started some time before midnight April 4, 1949, is the second worst disaster in such occupancy, being surpassed in number of fatalities only by the Cleveland Clinic tragedy, which claimed 124 lives on May 15, 1929.

The pattern followed by this latest holocaust closely parallels those of a number of fatal fires in hospitals and institutions in the past two decades, and leads to the inevitable conclusion that the nation, and to some extent the fire service, has failed to heed the obvious lessons taught by these recurring tragedies.

Like the majority of such fires, the blame cannot well be laid to any one factor; the responsibility must be shared alike by occupants, regulatory agencies, the fire department and local civil government, and the public.

The facts that there was great heroism shown in the emergency; that nurses and nuns died at their posts; firemen, all too pitifully few and ill-equipped, made the best of their limited resources and never faltered in the crisis, and that citizens and other volunteers gave their best, are commendable and according to the American tradition. But this fails to excuse the tragedy itself, which never should have occurred. All this effort will not bring back the 75 persons, 14 of them infants, who lost their lives; nor will it repay the score and more of injured, some gravely, many of whom may long bear the scars of the ordeal. Nor will it replace a greatly-needed hospital valued at close to a third of a million dollars.

Photo by Effingham News

Fire in Possession of Main Building of St. Anthony's Hospital

Starting in area shown at far right, fire traveled vertically to upper floor, then horizontally through roof area, then burned downward. Nursery over offices in wing at left. Note 24-foot extension ladder on steps, and absence of any visible rescue and fire fighting operations (other than charged line in lower foreground). Short ladder had already been used to save several people from windows at right. Condition approximately 30 minutes after discovery of fire.

Building Built to Burn

St. Anthony's Hospital was the only one of its kind in Central Illinois, where it served not only its local community, Effingham, but inhabitants of an area within a 20-mile radius. Effingham, a city of about 8,000 population and county seat of Effingham County, is located approximately 90 miles northeast of St. Louis and 180 miles southwest of Chicago at the junction of the Pennsylvania and Illinois Central Railroads, and the intersection of U.S. Highways 40 and 45.

The hospital was situated on a plot of ground 396' by 660'. The main portion was built in 1876 and was typical of the construction of that era. The main building faced south on St. Anthony avenue (formerly named Railroad ave-

*Henry E. Marschalk from boyhood has been interested in fire prevention and protection. He has been an active member of the Takoma Park, Md., Fire Department since 1932. He has served in various official capacities up to the rank of captain and now is a member of the Board of Trustees. He was president of the Montgomery County Association of Volunteer firemen and for five years has been Chairman of the Historical and Archives Committee of the Maryland State Firemen's Association. He has conducted many investigations into fire causes and effects and directed several fire prevention studies and campaigns.

Looking down into St. Anthony's Hospital after the fire

Legend: (1) nuns' home, undamaged by fire; (2) chaplain's quarters (second floor), chapel in rear; (3) patients' rooms; (4) one of the two spiral escapes; (5) offices on first floor; (6) waiting room, first floor (nursery above); (7) elevator enclosure; (8) operating rooms (surgery), kitchen below; (9) laundry; (10) heating plant, undamaged by fire; (11) patients and pensioners' quarters; (12) driveway; (13) maternity section, second floor; (14) nursery, second floor; (15) x-ray section, basement of wing adjoining laundry.

nue) in the northwest residential area and about three-quarters of a mile from the fire station, located in the city hall in the center of town. The institution was run by Sisters of the Order of St. Francis, and was one of ten hospitals in Illinois under their management.

As may be seen from the illustrations, St. Anthony's was a rambling, three and one-half story structure of thick brick walls, some brick partitions, with wood joists, floors and roof beams.

In the years since the original structure was erected, wings were added on the rear which more than doubled the institution's capacity. These wings gave the building, when viewed from the air and facing north, the approximate shape of the letter "W". Despite the obviously combustible nature of the main building, both press and public referred to it as "fireproof."

Heating was by steam, furnished by a boiler room located in a plant attached to the center wing, about 200 feet from the front of the main building. Electric wiring in the older portions of the building was reported to be an antiquated porcelain tube and nailed knob installation.

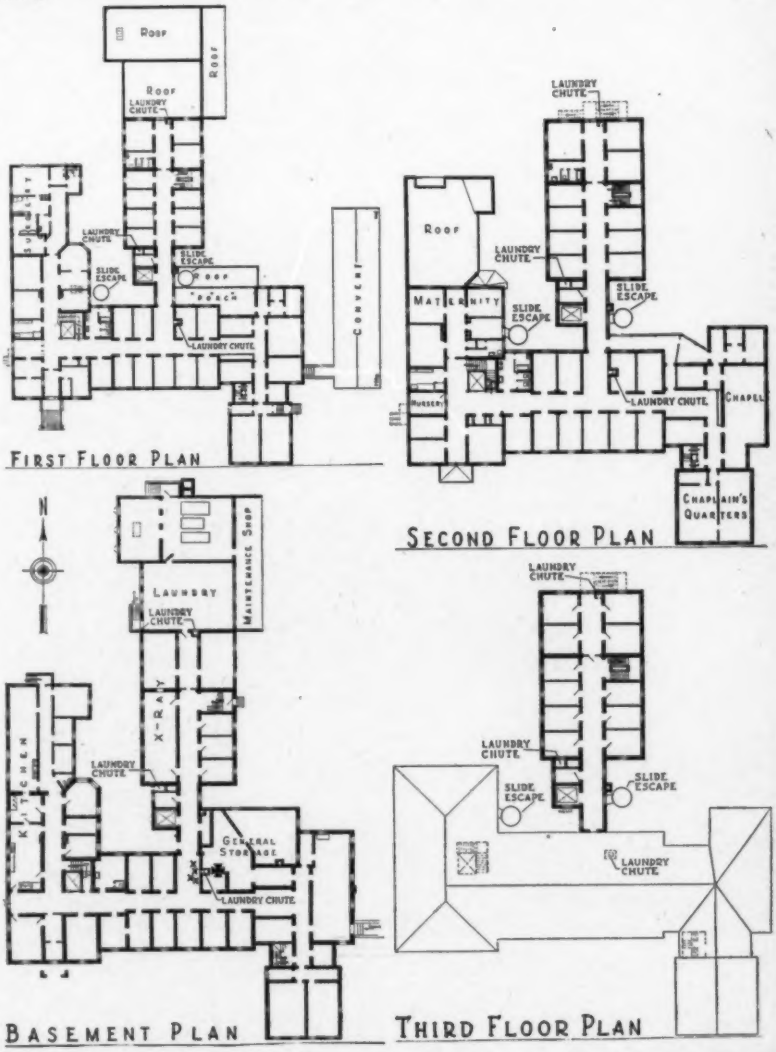
Ceilings of the first and second floors were high; the hallways were wide and contained no fire doors or stops to prevent lateral transmission of heat, smoke and fire. Nor were any of the three stairwells provided with enclosures. Doors were wood with wood transoms.

A wire-mesh enclosed elevator shaft near the southwest corner, had been abandoned some years ago, but the main stairway in this area remained and wound around the side and back of this shaft from basement to third floor. A modern, enclosed elevator in the center wing was the building's only operating elevator (and this failed when most needed, it is reported).

Two external, metal spiral escape chutes connected with the hallways of the center and west wings on all floors and their bottom doors opened outwards at ground level. Three laundry chutes were provided. These were lined with wood, with openings accessible from the hallways of each wing. The fire was reported to have started in the clothes chute for the east end of the building.

Three conventional metal fire escapes were attached to the outside of the building with their platforms at window ledge level. One of these, at the southwest end, led past the windows of the nursery in which were eleven infants and a nurse, all of whom perished.

Brickwork of the original building carried up only to the ceiling of the second floor. The third floor over this area comprised a honeycomb of dormer windowed small rooms, separated by flammable wallboard partitions, with a central hallway running east and west immediately under the peak of the roof. Stairwells at each end of this hallway connected with the floors below. The



Courtesy National Fire Protection Assn.

Floor Plan of Hospital

Basement: Fire started at "X". Empty extinguisher found at "XX". Note three laundry chutes and stairs. First floor: Stairs to office at left. Note two circular escape chutes. Convent (nuns' home) far right. Note also long unbroken transverse corridors. Second floor: Nursery and maternity at left; chaplain's quarters at right. Third floor: Showing roof section and chutes and stairs carried up from basement.

clothes chute in which the fire was discovered reached this level.

Hospital Did Not Measure Up to A.M.A. Standards

Although St. Anthony's Hospital was registered by the American Medical Association, it did not bear the Association's approval by the American College of Surgeons "as meeting unconditionally its minimum requirements for general standardization."[1]

According to the AMA data, St. Anthony's was a general hospital, owned or controlled by a church, having 122 beds, with an average census of 95; 16 bassinets; 823 births and total admissions for the year (1947) of 3,589.

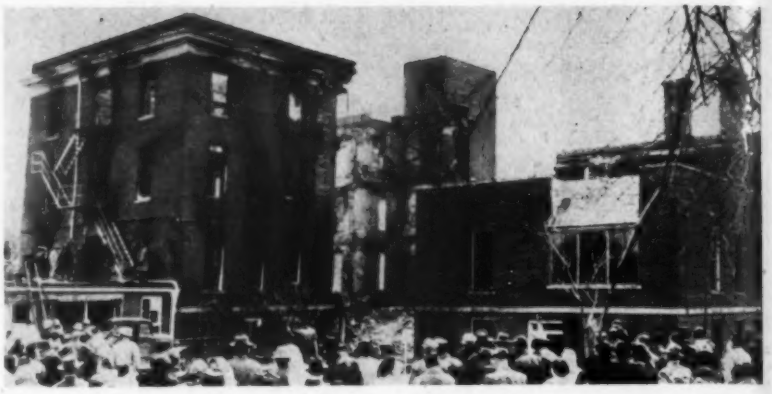
At the time of the fire it is said the hospital had a reputation for cleanliness and efficiency.

The Very Rev. Msgr. Jesse L. Gatton, of the Catholic diocese headquarters in Springfield, told a representative of FIRE ENGINEERING that in connection with fire safety arrangements for the hospital "they (the hospital authorities) had done everything that had been requested of them by the fire marshal's office and the insurance company, and that the hospital had been inspected by the insurance people only about a month before the fire. The hospital was insured by Travelers Insurance Company of Hartford for $300,000."

Msgr. Gatton observed that his people were not familiar with fire safety problems and "knew nothing about these things, but had to rely on the people who did know" (manifestly the fire authorities and insurance companies), and therefore his group had done all they could . . . "and you can't do any more than that, now, can you?"

In a press statement, Sister Superior Cecilianne, who was in charge at the time of the fire, said there were an estimated 108 patients in the hospital; it is reported 8 babies were in the nursery and several more were on the third floor. She said further, there were no patients on the older part of the third floor "as it was deemed hazardous."

[1] "Hospital Service in the United States, 1948—Hospitals Registered by the American Medical Association"—a reprint; Aug. 14, 1948.



Saddened Crowd Watches Removal of Victims of Hospital Fire

Firemen removing bodies from the first floor level at rear of center wing of burned St. Anthony's Hospital, Effingham, Ill. At right, the hospital operating room of modern construction and skylight was only slightly damaged by fire. Chief Wilkins and other firemen used 36-foot ladder here to rescue nearly a score of persons from this roof.

Reports agree that there were no fire detection devices, no sprinkler system, no alarm bells or other signal system to alert staff and patients and to facilitate evacuation. The office telephone switchboard and floor phones were depended upon for all communications and alarms.

Fire fighting equipment within the institution was limited to an assortment of 2½-gallon S & A fire extinguishers scattered throughout the area and some small hose with open play pipes connected with standpipes on the several floor levels. These were supplied by city mains.

According to the Sister Superior, there had been no fire drills of any kind held since the war. "They were held then only because of civilian defense regulations." It is said no nurses had been instructed in how to quickly release traction rigging, how to get their patients to the spiral chutes, and how to lead them to the outside fire escape platforms and ladders. This fact is advanced as one of the reasons why during the fire none of the fire escapes or chutes were used.

It is further reported that the fire department had not conducted any drills on the hospital nor was there any predetermined plan of attack by the local and neighboring fire departments in the event of fire in the hospital. According to fire officers, a number of the Effingham volunteer firemen were familiar with the institution, having been employed there at one time or another.

Local Fire Force Inadequate

The Effingham Fire Department consists of a chief, Frank Wilkins; two assistant chiefs, Charles Chamberlain and Harry Stalling, first and second assistants, respectively, and a total of 23 members. There were no call men or other members. Chief Wilkin has been in the department 18 years, 15 of those as chief. Chiefs Chamberlain and Stalling have both been in the department for many years.

According to Chief Chamberlain, the fire department has been organized for more than 100 years. Of its present membership, all are active except one, who is inactive because of age. Of the 22 actives, all but one, who was in Chicago at the time, engaged in fighting the fire.

Photo by Effingham News

Lone Sister Stands by Helpless as Flames Destroy St. Anthony's Hospital

View looking south into area between heating plant (far left) and center wing occupied by old age pensioners (left), and new operating room at rear of west wing (right). Involved area in distance is rear of main building. One of the two spiral escape chutes (not used) is shown immediately to left of west wing. Note absence of rescue and fire fighting operations.

Photo by Marschalk

Looking East from Main Entrance Hall Toward Area Where Fire Started

Man in helmet is aiding in search for bodies in debris at basement level. Corner of stairwell and abandoned elevator shaft are in left foreground. Nursery was located almost immediately above point from which picture was taken but nursery floor had burned through and blackened incubators and cribs were scattered about at first floor level.

The equipment of the fire department includes one 500 GPM pumper; one 750 gallon pumper and one two-wheeled trailer 500 GPM OCD pump. There is no ladder truck or other apparatus. Ladder equipment consists of a 36-foot extension ladder and a 12-foot roof ladder carried on the 500-gallon pumper and two similar ladders with the addition of a 50-foot 3-section aluminum ladder on the 750-gallon unit. The department has a limited amount of good hose and fittings but has no life net and is deficient in heavy duty appliances. Most of the fire fighting is done with 1½-inch hose wyed off 2½-inch.

Chief Winkins reported that the fire department's training has consisted of drills held about every two weeks in summer. He said that possibly half of his men have received short course training at the Illinois University Fire School at Champaign.

The nearest aerial ladder is said to belong to the Mattoon Fire Department, of Mattoon, 27 miles distant.

There are no fire alarm boxes in the town—all alarms being received by telephone.

Discovery and Alarm

According to Sister Cecilianne, it was a rule in the hospital that in case of fire the fire department was to be called first, then the building engineer, then herself.

The evidence of witnesses indicates that this procedure was not followed out after the fire was discovered. It is fairly certain that following discovery of the fire, the switchboard operator called the engineer, Frank Reis, before notifying the fire department.

The extent to which this contributed materially toward the delayed alarm to the fire department is not definitely known but that there was a delay in notifying the department, however, is certain. Unfortunately, in this, as in so many other fatal fires, the facts surrounding the delay may never be known because of the death of some of those who were most concerned with this phase of the fire.

When the fire was discovered, it is said that Sister Superior Cecilianne was in bed in the sisters' quarters, in a frame building east of the hospital. Sister Anastasia was at the switchboard, Sister Bertina and Sister Eustaschia were on duty in the building. Another one of the staff, Sister Edmunda had just left the third floor and was said to be going off duty a short time prior to the fire. Both Sisters Bertina and Eustaschia perished in the fire. Sister Anastasia was unavailable for questioning after the fire, being reported as administering to the needs of Mrs. Frank Reis, wife of the building engineer who lost his life. Mrs. Reis was critically injured escaping from the building. A private nurse, Frances Pitchford, was on duty on the first floor, and another nurse, Fern Riley, 23, was in charge of the nursery. A male attendant, Ben Biederhorn, was asleep on the third floor. The Chaplain, Rev. C. C. Sandon, also was asleep in his quarters in the southeast corner of the second floor.

With perhaps some variations, this was the general picture at the time of the actual discovery of the fire.

The father of a young boy patient who was visiting his son, is reported to have said that he smelled smoke some ten to fifteen minutes prior to any commotion attendant upon discovery of the fire. He called this to the attention of one of the Sisters in the hallway nearby but she reassured him nothing was wrong.

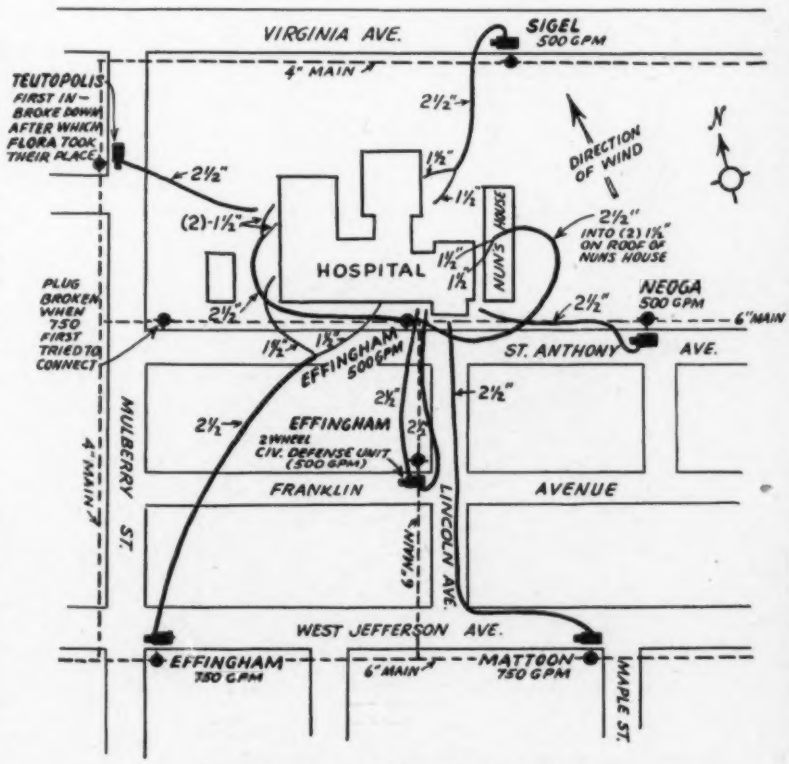
The time was probably a little before 11:30 P.M. Somewhat later, when smoke could be seen, this gentleman encountered the same Sister, as he was taking his boy out of the building, and he asked what she had done about the matter. She is reported to have said that she had notified the building engineer (Frank T. Reis). Shortly thereafter Mr. Reis was seen running with a hand extinguisher through the first floor corridor toward the source of smoke.

Apparently, Mr. Reis discharged his extinguisher into the clothes chute at the first floor level, the empty extinguisher being found in the debris after the fire. Mr. Reis was last seen when he raced downstairs into the basement, presumably in a further effort to attack the blaze. He never emerged alive.

From the position of his body when found, and the location of a burned-off hose nozzle, evidently from the standpipe system, the assumption is that he did get a hose line into action before he was overcome. This is further indicated by the evidence of a graph recording meter card which indicates a distinct surge dip in the water supply system pressure about that time.

According to Mr. Gramm, manager of the Effingham telephone office, the first call to the fire department was put through to telephone number 43 in the city hall about 11:45 P.M. "It might be a minute or two either way," Mr. Gramm admitted (fire messages evidently are not recorded).

The particular telephone mentioned is a general purpose phone on a desk in a back room of the town's police station. There is no telephone used exclusively for fire calls, although telephone operators are instructed to put through emergency calls by cutting in on this



Pumping Operations at St. Anthony's Hospital Fire

phone if necessary. The phone is usually answered by the janitor. The night of the fire, janitor Lawrence Lustig took the fire alarm message from the hospital.

On the janitor's desk is a push button which is wired to a small door bell in a bunkroom over the fire station, which is just beyond a partition. Within the last year, arrangements had been made for the department's two assistant chiefs to sleep in the fire station on alternate nights. On the night of the hospital fire, First Assistant Chief Charles Chamberlain was the man on duty.

The janitor told Chief Chamberlain that there was "a fire in the clothes chute at St. Anthony's." The chief set the time when he left the janitor's desk to operate the fire pumper at 11:48 P.M. He also stated that he did not hear the siren on top of the city hall at any time.[2]

It is the procedure in the Effingham Fire Department for the janitor, after he has received a fire call and relayed it to the fireman on duty, to telephone the fire chief, the other assistant chief, and both pump operators. Then the janitor closes a switch mounted on the wall about eight feet from his desk, which operates the siren on top of the City Hall.

Chamberlain has said that within two minutes of hearing the bell he left for the fire, with town Policeman Tom McConkey, and the department's 500 GPM pumper. He has estimated his running time to the fire at three minutes.

Further evidence on the chronology of alarms and response is given by another witness who lives about two and one-half blocks from the hospital. He was at home reading, when he heard the fire siren on the City hall and immediately went out on his porch, glanced around and saw the glow of the fire over the roof of St. Anthony's Hospital. He went back inside and shouted to his family that St. Anthony's Hospital was on fire and he noted then that the time was 11:50 P.M. This witness then boarded his commercial truck and drove to a point opposite the hospital, arriving in time to see Chief Chamberlain and Policeman McConkey placing a ladder at a window and about to rescue two women. At that time, said the witness, flames were coming out of two windows from a recessed corner in the southeast corner of the main building. There were other people also awaiting rescue in windows of the second floor along the south front of the structure.

[2]The fire siren which alerts the volunteers is of the plain uncoded type.

Progress of the Fire

There is some conflict of opinion over the progress of the fire. Some witnesses said that the fire "spread like a ball of fire" and a majority spoke of its rapid spread. From the evidence, it is clear that the fire made rapid progress up the clothes chute, to involve the roof area, spreading laterally throughout the building and eventually burning downward. The roof areas were the first involved, as is borne out by the photographs made during progress of the fire.

On the other hand, one witness said that "quite some time" after the arrival of the fire apparatus he was able to walk into the hospital main entrance hall at the southwest corner of the building and that in this area the lights were still on, although he saw smoke and fire at the far end of the long hall running parallel to St. Anthony avenue. He said that smoke and heat at his end of the building were not bothersome and that, further, he observed one of the Sisters walking along the hall silhouetted by the fire.

At this time this witness discussed with a man who had been in the hospital with his son, who was a patient, the fact that nothing had apparently been done to call the fire department for ten or fifteen minutes or longer after the smoke was first smelled. This witness also advanced the observation that it should have been very easy, even at that late stage, to have rescued the infants from the second floor nursery almost directly above where he stood. He times these events at about 12:00, or about fifteen minutes after the fire alarm was sounded and approximately one-half hour to thirty-five minutes after the fire probably started. Further, he believes it was about 12:20 or 12:25 before the first out-of-town fire truck arrived.

Sister Superior Cecilianne stated to FIRE ENGINEERING's representative that when she was called by the Sister at the switchboard in the hospital, she dressed swiftly and in possibly three minutes, she thought, she crossed over the short space between the Sisters' home and the hospital. She entered a door at ground level which leads to a stairway and in turn leads up to the first floor or down to the basement. Cister Cecilianne said she could not get into the first floor but was able to go through the entire basement and that she saw no fire down there when she entered. However, it is entirely possible that the fire was confined within the clothes chute at this level and that some smoke may have reduced visibility in the immediate vicinity of the chute at this time.

Fire Fighting and Rescue Operations

Chief Chamberlain spotted the 500-gallon pumper at a hydrant on St. Anthony avenue, directly in front of the hospital. He decided immediately that rescue must take precedence over fire fighting operations. Therefore, he used a 36-foot ground ladder which, with Officer McConkey helping, was placed at a window near the southeast end of the building. One young woman descended the ladder immediately, after which the chief climbed to the second floor level and carried out another, older woman.

During this operation, Chief Frank Wilkins arrived in his private car and he and Chief Chamberlain shifted the ground ladder to rescue several others. At this stage, people were beginning to jump. Chief Chamberlain then hurried to the rear of the east wing where there is a porch. He climbed this and was able to enter a hall which led to several rooms from one of which he removed two women before heat and flames prevented his return. From the porch an elderly man was helped over a window sill, and the chief then returned to the front of the building, passing the main entrance, where he saw Chief Wilkins

Photo by Marschalk

Ruins of St. Anthony's Hospital, Where 77 Perished

Composite general view of hospital from the southwest at a point on St. Anthony's avenue. Effingham's 750-gallon pumper is in driveway leading to emergency entrance, below canopy. Fire started in clothes chute in wrecked area behind right end of building, far right, in which dwelled the resident priest, who perished. First hydrant used is behind wrecking car, right.

and other firemen, who had arrived on the scene, engaged in rescuing eight or ten people from the roof of the operating room—they had reached this roof by way of second floor windows opening from the rear of the west wing. Apparently these rescues were conducted with the same 36-foot ground ladder.

Photo by Marschalk

Effingham City Hall and Fire Department Headquarters, on Banker Street, Is about Three-Fifths of a Mile from St. Anthony's Hospital.

Effingham's second pumper, the 750-gallon unit, arrived shortly after the smaller unit and took a position at a hydrant on the corner of St. Anthony avenue and Mulberry street. When an attempt was made to open the hydrant, the operating nut was twisted completely off.

This pumper was then driven two blocks south to the corner of Jefferson and Mulberry streets where it was eventually put in operation with a 2½-inch line stretched to a wye with two 1½-inch lines of 100-foot length each, which played on the fire at the southeast corner of the building.

Throughout most of the fire, no lines were taken into the building, it is reported, and all fire fighting was directed from the exterior. No 2½-inch lines were used until after the out-of-town fire companies arrived on the scene, it is said—only the wyed 1½-inch lines.

Mutual Aid Functions—Only Partially

Records of the State Police indicate their first word of the fire appears to have been received at 12:00 midnight, at which time they were notified by telephone of a fire in St. Anthony's Hospital.

This notification was sent out by radio and picked up by State Policeman George Baker in car 171. At this time Patrolman Baker was about two miles south of Effingham on Route 45. He immediately headed for the hospital. Records of the State Police Radio Station indicate that Patrolman Baker advised his headquarters of his arrival at the fire at 12:04 A.M. and at 12:06 A.M. he reported that the fire was a serious one. According to State Police Captain C. M. Robinson, officer-in-charge of Police Districts 12 and 10, based in Effingham, the police radio log shows no request on the part of the Effingham Fire Department for assistance. It does show that at 12:10 A.M. Radio Operator Glenn Becker took the task of calling for help upon himself and that he telephoned the towns of Neoga, Altamont and Teutopolis, while by radio he called Mattoon, Flora and Salem. These calls were completed at 12:20 A.M. A Mattoon company made the 27-mile run to Effingham and had started to pump at 1:00 A.M.

It is understood that none of these calls for assistance specified any particular type or kind of fire apparatus or equipment. Thus it was that all aiding departments sent pumping units and no ladder or rescue trucks. It is disclosed, also, that although some twenty-five fire companies in the Effingham area belonged to the old National Trail Firefighters Association, a mutual aid organization [Assistant Chief Charles Chamberlain is secretary of this association], no specific plans had even been prepared to meet an emergency such as fire in the hospital. Automatic response of ladder trucks, aerial and service type, might have altered the disaster picture somewhat. Critics also point to the fact that the fire alarm was sounded at 11:45 P.M. and that not until 12:10 was outside help called for and then only on the initiative of State Police. The Police radio log shows that at 12:21 the Flora department advised they were on the way, and at 12:31 A.M. the Salem department reported it was en route.

As manpower arrived, together with additional equipment, efforts to confine the fire, and protect exposures got under way. Perverse fate dogged the fire fighters, however. When the Teutopolis 500 GPM pumper arrived after a run of 4 miles from the east, it connected to a hydrant at the corner of Mulberry and Nora streets. After a brief operation, however, its hard suction sleeve broke and the unit went out of service. This pumper was replaced by the 500 GPM Flora unit, which had come 33 miles from the south.

In the meantime, the third piece of Effingham apparatus, the 500 GPM OCD trailer pump, was placed in service at the corner of Lincoln and Franklin avenues, about one block south of the hospital. Two 2½-inch lines were used from this machine. A single 2½-inch line was stretched from the Flora pumper and operated on the northeast end of the building. A 500 GPM pumper from Neoga, about 12 miles north-northeast of Effingham, was placed about a block east of the hospital and one 2½-inch line laid to operate from it on the southeast corner of the building.

The 500 GPM pumper from Sigel, eight miles north-northeast of Effingham, was located on Virginia avenue about 600 ft. northeast of the hospital, while the 750 GPM unit from Mattoon, 27 miles distant, went into service at a hydrant on the corner of West Jefferson avenue and Maple street, a little more than two blocks south of the hospital.

According to Chiefs Wilkins and Chamberlain, assistance was sent by the following out-of-town departments:

Department	Miles to Effingham	Pumper Rating
Teutopolis*	4	500
Sigel	8	500
Dieterich	9	500
Altamont	12	500
Neoga	14	500
Newton	18	500
St. Elmo**	18	500
Mattoon	27	750
Flora***	33	500
Salem	45	500
Centralia#	66	500

*Hard rubber suction broke; went out of service.
**Not used because of fear of excessive depletion of water supply.
***Took hydrant abandoned by Teutopolis.
#Used later for salvage work.

Incoming units "covered in" at the Effingham firehouse during the operation while personnel of others which did not pump served on lines of other units and aided in the search for victims.

Most of the incoming out-of-town forces operated 2½-inch lines with as large nozzles as pressures permitted. There appears, however, to have been no use of deluge or deck pipes and most of the streams were fruitless against the roaring fire. Fire fighters were unable to cut off the fire from any portion of the building, or wings, with the exception of the new operating room, which was only slightly damaged. The long, wooden, nurses' home was covered against radiated heat and some firemen and civilians watched the area for flying embers carried on the light wind from the SSE.

Within three hours, floors, roofs and part of the walls had fallen, leaving little but a rubble-filled skeleton, in which were buried the bodies of many victims.

Chief Chamberlain has estimated that the Effingham 750-gallon pumper operated for approximately nine hours; the 500-gallon for 42 hours, and the OCD

Aerial Overall View of Burned St. Anthony's Hospital

View is looking south from rear of hospital. Photo taken during memorial rites for fire victims, April 12, 1949, shows hospital ruins and residential neighborhood. Undamaged power plant (left) and garage (lower left). Nuns' home is shown at far left, behind chimney.

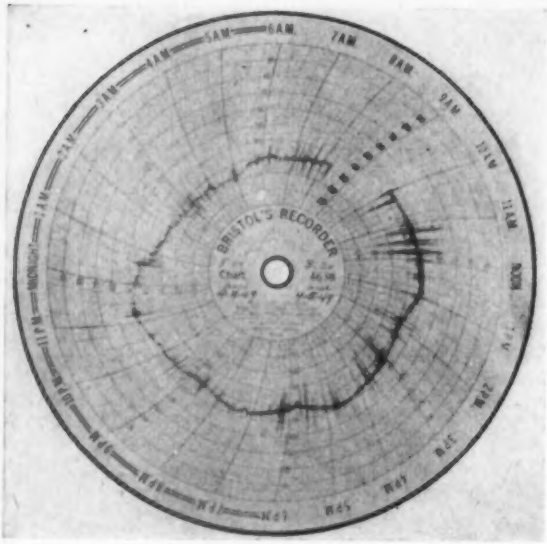


Photo by Marschalk

Graphic Story of Hospital Fire Told by Water Recorder Chart

Water pressure recorder chart of the Effingham Water Company shows pronounced dip at 11:10 P.M., but correction of chart timing according to known factors, such as initial operation of big pumper from Mattoon (at 1:00 A.M.), indicated first surge occurred at about 11:35, or ten minutes before alarm was telephoned to fire department. Graphic chart indicates an effort was made to fight the fire from building standpipe. Pressures dropped from about 50 pounds at 11:10 P.M. to 22 pounds at 5:00 A.M., when pumping operations were curtailed.

unit for about nine hours. Visiting companies worked for an average of five to six hours.

Water Supply None Too Good Because of Small Mains

Fire fighting operations were handicapped somewhat by the limited capacity in the town's water system. Mains on which two of the out-of-town pumpers operated were only 4-inch. The remaining mains were 6-inch in the area of the hospital and these all were supplied from a 158,000 gallon standpipe located near the center of town.

This standpipe was in turn supplied by water taken from the Wabash River about three miles distant; water was pumped from it to a reservoir about two and one-half miles distant and from this through a 12-inch main into the standpipe.

Static pressure in the town's water system normally is about 45 pounds, with a maximum of 51 pounds when the tank is full. The water disbursement's record chart previously mentioned indicates that some time prior to the alarm, someone was using a considerable amount of water, which brought the static pressure from 50 pounds down to 47 pounds at the time the alarm was received. Further study of the chart indicates a continuing decrease in pressure until at 5:00 A.M. the water pressure stood at only 22 pounds. The pressure then was rebuilt slowly, only because fire department lines were being shut down; the fire had virtually burned itself out.

Several firemen sustained minor injuries, including burns, cuts and bruises. A Salem fireman received a cracked helmet from a falling brick and another brick struck the back of Chief Wilkins, luckily falling flat and only bruising him.

Before the ruins had cooled, Illinois Governor Adlai Stevenson ordered the state fire marshal's office to conduct an investigation into the cause of the tragedy. According to newly appointed State Fire Marshal Pat Kelly "there was evidence that the hospital had been freshly painted." There was also inconclusive evidence that paints and varnishes had been stored in the basement, where the fire started." Kelly said that if the fire began in the basement with the doors in the corridors thrown open and the windows open "a flash fire of this type could happen in five or ten minutes." The Marshal is quoted by the local press as saying a thorough investigation would be made "after the confusion and hysteria have abated." He said persons closely connected with the fire were too stunned to give coherent accounts" and returned to the capitol, leaving Deputy Marshal Algy P. Appanaitis on the scene.

Hospital authorities admitted that the reception room of the hospital was being painted, but stated that any paint on the premises were stored in the boiler room which was untouched by the fire.

National Guard and Red Cross on the Scene

As soon as the magnitude of the disaster became apparent, Company F of the Illinois National Guard of Effingham, was called out. Fire lines were established and guardsmen aided in restoring order. They were helped by members of the State Police whose radio proved a boon in the emergency.

The American Red Cross sent workers from St. Louis with 50 cots, 100 blankets and 200 units of blood plasma and set up a shelter on the Hospital grounds. Additional plasma was rushed from Mattoon.

The fire destroyed much of the town's supply of medications and doctors appealed to out-of-town agencies for supplies, which were quickly forthcoming.

All available ambulances were marshalled to take the injured and sick to places of haven. As the bodies were removed they were placed in a temporary morgue in part of the Hospital garage. Identification of the victims proved difficult, because most hospital records were destroyed by the fire and because in the case of the infants, many of the identification bracelets were melted by the heat. Three bodies of infants remained unidentified.

Aftermath of the Fire

Following the tragedy, many states and municipal governments set about overhauling their regulatory measures designed to prevent duplications of such disasters.

In Illinois, Governor Adlai Stevenson directed the state fire marshal to re-examine at once the fire protection of all state and private hospitals.

On April 19, 1949 a resolution (H.R. No. 50) was introduced in the Illinois House of Representatives which says in part: "It appears that needless loss of lives could be greatly reduced through the use of modern life saving techniques and devices." The resolution charges the Executive Committee of the House—to which it was referred—to make a thorough investigation and study of life saving techniques and devices and all facts pertaining thereto, with a view of introducing legislation pertaining to this subject in the Illinois General Assembly.

The Executive Committee scheduled hearings on this resolution for May 3rd in the House Chambers at the state capitol.

Incidentally, according to the records of the American Medical Association, that state leads the nation in hospital facilities maintained by Church and related nonprofit groups.

In Missouri, St. Louis Fire Chief Frank Egenriether ordered commanding officers of all companies in the city to inspect all hospitals, homes for the aged, orphan homes and similar institutions. City Building Commissioner A. H. Baum seeks to have the present code changed. At present, institutions built prior to the city's building code are not required to conform to the code. He wants a retroactive ordinance that will require hospitals, etc., to conform to the code's fire regulation within a year.

In Arkansas, immediate inspection of all Arkansas hospitals and related institutions was ordered by Gov. Sidney S. McMath to prevent recurrence of such conditions as those involved in the Effingham catastrophe. License of any of the state's 172 hospitals or related institutions may be revoked for failure to comply with safety regulations. The plan to check the conditions was developed by State Insurance Commissioner J. Herbert Graves, Fire Marshal Lee Baker, Director Moody Moore of the hospital division, State Health Department, representatives of the Arkansas Firemen's Association and Arkansas State Fire Prevention Bureau.

In Connecticut, Senator Cornelius F. Mulvihill of Bridgeport claimed that the Effingham hospital disaster might be duplicated in any one of several state institutions which are "overcrowded, under-manned and poorly-equipped."

On April 12, 1949, the Virginia State Corporation Commission under authority of a 1948 state law, issued a new statewide fire prevention code imposing fire safety regulations on all public buildings. The code becomes effective in its application to new buildings on Julv 12, next; old buildings must be altered to conform to the code by April, 1950.

The new regulations include provisions based directly upon recent national disasters, such as the Effingham hospital holocaust. Public buildings are defined in the code as "any building or structure, permanent or temporary, which is used or occupied or to be used or occupied by 10 or more persons who are employed, lodged, housed, assembled, served, entertained or instructed therein."

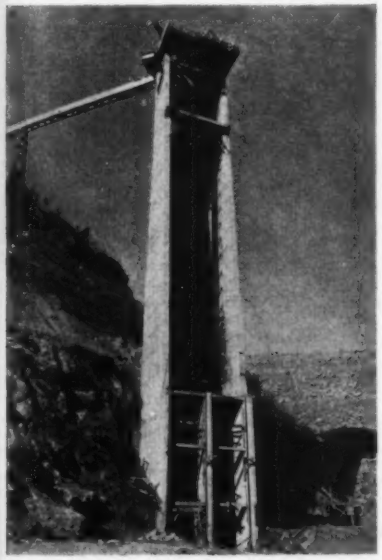
(Continued on page 364)

LOFTY BLAZE PROVES DIFFICULT TO BRING UNDER CONTROL

Fire in 286-foot Tower Taxes Ingenuity of Firemen; Lack of Approach Facilities Adds Handicap

By Captain Charles A. Key
US-TVA Public Safety Service

WATAUGA DAM, located high in the mountains of east Tennessee on the Watauga River, is one of a series of Tennessee Valley Authority storage dams designed to assist in the prevention of floods in the lowlands of the Valley and also to take its place in TVA's electric power generating and distribution system. The dam, an all earth and rock type, is three hundred twenty feet high, reputedly the highest dirt dam in the world.



Close-Up of Tower Taken Two Weeks After Fire. Repair Work Is Largely Completed. Some Charring Is Still Noticeable Around Lower Stage and Edges of Top Deck

To develop electric power, it was necessary to drive a tunnel eighteen to twenty feet in diameter 3,700 feet through appropriately named Iron Mountain between the selected site of the power house and the dam. Just above the dam at the tunnel entrance an intake tower was built of reinforced concrete, with steel tracks for a massive steel gate which would control the flow of water into the tunnel. The tower is 286 feet high with a walkway stretching horizontally 178 feet from the side of Iron Mountain to the top of the tower.

But on the crisp, bright morning of October 12, 1948, neither the tower nor the walkway were quite completed. Construction schedules called for the lake to start filling on December 1, 1948. The last wooden forms were being stripped from the top of the tower. Bolts were being cut by welders' torches. At the same time, the last coats of highly flammable tar-like preservatives were being put on the gate and tracks. A continuous, chilling wind swept upwards in the gigantic chimney-like structure, and the form strippers shivered as they worked. A red hot bolt came in contact with a wooden form. A tiny curl of smoke arose, then a small flare of red flame. The upsurging air currents caught the flame and spread it rapidly through the dry wooden forms. The time was 11:05 A.M.

The Public Safety Service, TVA's uniformed protective force, received the alarm by telephone at 11:10 A. M. Public Safety headquarters was located in the camp area, about three miles from the construction area and tower site. Access to the location of the tower was reached only over a muddy, torturous construction road. Six members of the Public Safety Service, including the Lieutenant in charge of Watauga Public Safety Service, the Firefighter-Inspector and four Public Safety Officers responded with the fire apparatus, a 200 gpm pump on a Ford chassis. The ride up the side of the mountain to the tower was one which will not be forgotten soon by those who held on for dear life as the truck lurched, skidded, and careened up the dangerous little road. The truck arrived at the scene of the fire at 11:20 A.M.

There was no water at the tower, and the fire had gained extensive headway. The wooden forms around the top of the tower and for some distance down in the tower were burning as the Public Safety Service arrived. Following close behind the fire truck was a 500-gallon water truck. While preparations were being made to draft from the water truck, Public Safety Officers scaled out over the walkway and attempted to hold down the fire spread by use of portable extinguishers. The walkway was not completed; the only flooring being three-inch and one-inch angle iron pieces laid diagonally across the bottom approximately thirty inches apart. A misstep meant a fall of over two hundred feet.

The attempts with the portable extinguishers were fruitless, and the firemen were driven back down the walkway by the heat. However, in less time than it takes to write this sentence, the draft from the water tank to the fire truck was completed and two inch-and-a-half lines with all-purpose nozzles were connected to the discharge side of the pumper. One of the nozzles was outfitted with a high velocity tip and the other with a four-foot applicator.

Advancing cautiously over the treacherous walkway the firemen on line number one used solid stream and high velocity fog alternately to try to push the fire back so they could gain access to the top of the tower. The low velocity fog from the applicator on line number two was used to protect line number one from the heat. The hundred-pound nozzle pressure, which is necessary for effective fog, and the wet, slippery angle iron in the walkway made operations quite hazardous. The natural air current in the tower plus the the added draft created by the fire caused the fire to burn with considerable heat and intensity. Time after time the firefighters almost gained the top of the tower only to be driven back by the flames.

Although the tower was constructed of reinforced concrete, and the only portion afire was the wooden forms, which were worthless and were being prepared for salvage, it was entirely possible that the preservatives on the gate below might catch fire and cause the gate to warp. It was also possible that the fire could reach such intensity as to damage the tower itself. The gate cost in excess of $70,000 and the cost of the tower was over $200,000. What the delay in closure would mean in terms of power and flood control losses would be impossible of estimation. It was therefore imperative that the fire be suppressed at the earliest possible moment.

While the fire fighters were attempting to force their way to the top of the tower, TVA construction forces, with amazing speed, laid a two-inch raw water pipe line two hundred feet up the side of the mountain from the nearest main and connected it with the water tank truck. Powerful construction pumps sent the raw water surging up through the two-inch pipe in sufficient

Photo Taken Two Weeks After Fire Showing Relationship of Tower (on the Left) to the Dam

volume to equalize the discharge of the two inch-and-a-half lines, therefore assuring the fire fighting force of adequate water.

After repeated attempts, a foothold was finally established on top of the tower, but the fire continued to burn fiercely under the overhanging top ledge (see illustrations) and down inside. The top of the tower was like a hot stove lid. The crews on the two lines wet each other down in order to be able to stand the heat coming up from below. The fire was inaccessible except from the top of the tower.

By switching to high velocity fog on both lines, and alternating between straight stream and high velocity fog, the highest of the flames were soon pushed further down into the tower. But while this lessened the heat exposure of the firemen, it also made the fire less accessible due to the overhanging top deck, and due to the fact that the under side of the top deck was itself burning. To combat this complication, a man in a sling was lowered with one of the inch-and-a-half lines over the edge of the ledge. Although he suffered considerable heat exposure and was buffeted about by the writhing hose under a hundred pounds pressure and by the hot air currents, he was able to knock the fire out of the under side of the top deck.

After that, it was practically all over but the shouting. By wetting down and cooling the bulkheads, the crews were able to descend ladders down into the tower. They fought fire every step of the way to the lower stage, some twenty or thirty feet below the top. They were also able to keep the tar-coated tracks and gate wet down.

The fire started at 11:05 A. M. At 3:00 P. M. the fire was out, and the truck returned to its station. No material damage was done to the tower or the gate.

In its sixteen year history the Tennessee Valley Authority, in addition to running the gamut of ordinary Class A, B, and C fires, has also had its share of weird and difficult fires: phosphorous which dried out and set fire to footprints, firemen's boots, ladder rungs and fire hose; marine fires; and fires in 200,000-ton coal storage yards; but to the writer, the fire in the intake tower was about the most unique and difficult in recent history from a suppression standpoint.

The suppression battle seemed to embody a number of points worthy of mention. First and foremost was the teamwork between the firefighting forces and the construction personnel as evidenced by the rather remarkable record of laying the two-inch water lines and getting it in service before the initial water supply was exhausted. Second probably would be the imagination and initiative displayed in using the water tank truck and the connecting two-inch line; and also use of the sling to lower the fireman with a line so that he was able to get at the fire on the under side of the top deck. Then there was the full utilization of rather modest fire equipment — the small capacity pumper, the small lines, two types of water fog used to their fullest in fighting a major fire.

In any event, the gates were closed on December 1, 1948, as per schedule, and the lake stands at 202 feet up the side of the tower as this is written.

PACIFIC GROVE'S NEW STATION INCORPORATES NOVEL FEATURES

To Serve as a Memorial as Well as Center of Activities for Volunteer Firemen

PACIFIC GROVE, Monterey County, Cal., is a community of 10,000 persons. On November 6, 1948, its firemen and citizens proudly dedicated their new fire station with impressive ceremonies, as an enduring war memorial to the Pacific Grove citizens who served in World War II.

During the dedication ceremonies, a bronze plaque was unveiled on which is inscribed the names of twelve members of the Pacific Grove Volunteer Fire Department who served their country during the last war. Particular mention was made of Lieut. Ferd. S. Bambauer, U. S. Navy, who lost his life in the closing days of the Battle of the Atlantic.

The new station, which incorporates many modern improvements in design and construction, is not only a memorial to those who served in the war, but a testimonial of the regard held by citizens of Pacific Grove for its volunteer fire department. The community is conscious of its dependency upon the volunteers, eighteen in number, and its five paid driver-engineers who respond to all general alarms, sounded on the department's coded signal horn.

Because the volunteers have played and will continue to play such an important part in the operation of the Pacific Grove Fire Department, no effort has been spared to make the new building convenient and comfortable for them as well as a suitable housing for the department's apparatus and equipment.

The site selected for the building was given top priority by the engineers of the Board of Fire Underwriters because of its central location and its frontage on Pine Avenue, a broad thoroughfare.

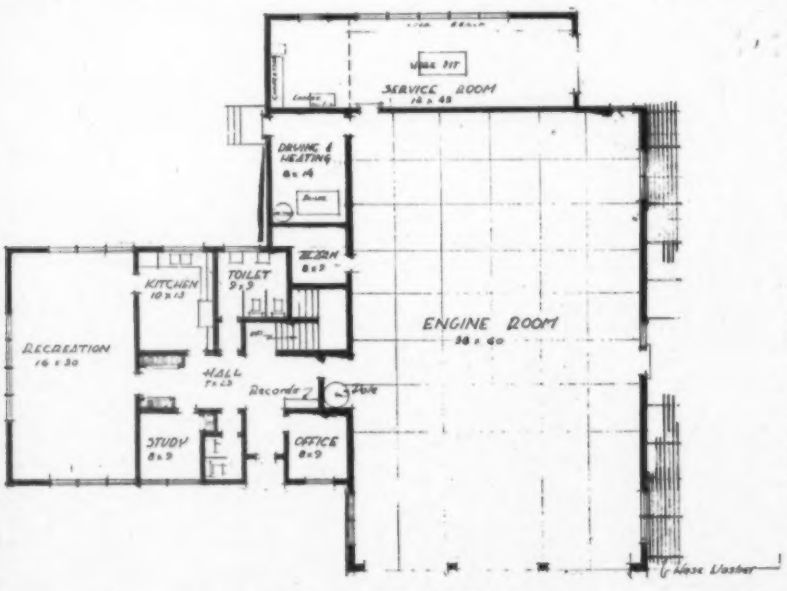
The initial designs contemplated a conventional two-story type station with living and recreational quarters over the apparatus room. Because of the necessity of providing a fire resistive floor separating the first and second stories, the cost of this type construction was found to be prohibitive.

Fire Chief Lavere Todd then made an inspection trip during which he studied the fire stations of other comparable cities in California. After viewing some eighteen fire houses he, in cooperation with Architect Robert Jones, evolved the plan that was finally adopted.

This plan, as diagramed in the accompanying sketch, consists of a single story, four-hour fire resistive equipment room, 38' x 60', which will accommodate six pieces of apparatus. The adjoining recreational and living quarters are of two-story, frame, one-hour fire resistive construction. Sleeping accommodations for sixteen men are provided on the second floor.

On the first floor, in addition to the offices and alarm room, there is a large recreational room with an adjoining modern kitchen. To the rear of the apparatus and equipment room is located a one-story service and repair room, 12' x 43'. At one end of this room, and rising to a height of three stories, is a drill tower to be used in training all personnel.

Other features of the new station are



Plan of First Floor of Pacific Grove Fire Station

Newly Erected Fire Station at Pacific Grove, Cal.

radiant floor heating for the entire first floor; built-in battery charger outlets in the floor of the equipment room; vertical venetian blinds in the recreation room; electrically operated doors controlled from the recorder desk; and a 2000 gallon suction tank under the outside concrete apron.

A factor in the creation of this modern fire station appreciated by the citizens of Pacific Grove, as well as the fire force, is that through the foresight and good planning of their City Council and administrative officials, and the close coordination with the fire department, they are the beneficiaries of a most modern, efficient new fire station at a total contract cost of $55,668.00 at a time when it appeared almost certain that the $60,000 originally appropriated for the job would not be sufficient.

The Architect of the new station is Robert R. Jones. The general contractor is Stolte, Inc., of Monterery, Cal. A. D. Coons is City Manager of Pacific Grove.

Detroit Department Has Quiet Month

The February fire record of the Detroit, Mich., Fire Department was one of the best ever recorded in the long history of the Department. Fire losses were down an estimated 30% from the same month in 1948. It was also an unusual month in that the Department was called upon to fight only 2 multiple alarm fires. Neither of these multiple alarm fires extended beyond a second alarm and together the fire loss was under $25,000.

The second of the two multiple alarm fires during the month of February was, however, worthy of note. It was the second multiple alarm fire within a period of less than two months in the sprawling Mack-Warren Plant of the Briggs Manufacturing Co. The company is one of the larger suppliers of automobile bodies for the motor car industry. The earlier fire (see FIRE ENGINEERING, January, 1949) was a three alarm blaze, while the latter fire was a two alarm affair.

At 10:34 A.M., February 19th, Box 9412, Warren and Gladwin was sent to the Department bringing three Engine Companies, 45-41-52, two truck companies, 19 and 31, together with Rescue Squad 3 and the Chief of the 6th Battalion, Raymond Brown. Chief Brown was also in charge of the fire companies at the earlier extra-alarm fire.

The fire was found to involve the first floor loading docks at the Warren end of the plant. Although the fire never got beyond an area of some 10,000 square feet, the dense smoke quickly filled the upper floors of the 5-story structure. Thus, when the ladder companies arrived, they took positions directly in front of the building and raised their aerial ladders to effect any rescue work that might be needed. Fortunately none was needed. Being Saturday, only a small force of workingmen were on duty and these escaped without difficulty.

While the truckmen proceeded with ventilation operations on the upper floors, the pipemen from the Engine companies attacked the fire. This operation was fraught with great difficulties for the fire was burning in the heavy timbers and flooring of the loading docks and these timbers were covered with large steel sheets of some ¼-inch thickness. Obviously more man power was needed and Chief Brown called for a second alarm over his two-way radio.

This call was received and dispatched to the Department at 10:46 A.M. and brought three additional Engine Companies, 46-32-26, Ladder 14 and Rescue Company 1. Battalion Chief 12 also responds on the second alarm.

The fire was believed to have originated from cutting torches used by workmen engaged in repairing the loading docks. Once the fire got in behind the steel sheathing of the docks it burned out of control because of the inability to get streams to the seat of the spreading fire.

There was nothing that could be done until the job of cutting away the sheathing was accomplished. Both Rescue companies used their cutting equipment to good advantage, but the work was slow and extremely difficult. At this juncture, the millwrights from Department 45 of the plant's working force augmented the fire forces by bringing in their cutting equipment and setting to work. It was a fine demonstration of team work. The pipemen, working in as fast as the plates were cut open, rapidly extinguished the confined fire.

The Second alarm companies began picking up at 11:30 A.M. and the fire was out at 12:30 P.M. Damage was about $15,000. —JOSEPH A. KLEEFUSS

Three Firemen Killed at Fire

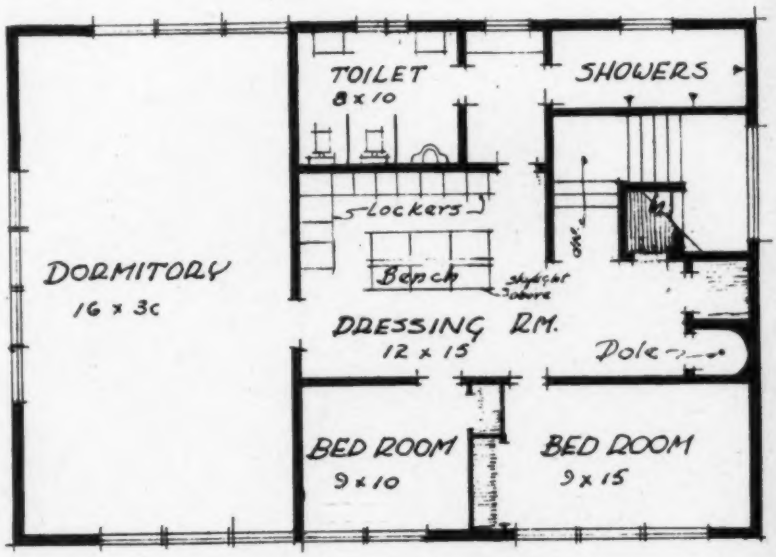
Damage was estimated at $50,000 following a fire in which two firemen were killed when their fire truck overturned while enroute to a blaze at Nashua, N. H., on Jan. 13. A volunteer died in a fall down an elevator shaft while running to the scene.

Capt. Alfred J. La Plante, 40, and Fireman George McCaughney, 30, were crushed to death when the apparatus collided with an auto, grazed a bus and overturned. Some 20 bus passengers were treated for minor injuries.

Clarence Whitten, 42, a call fireman, responding to the general alarm blaze in a four-story brick apartment and residential building in the city's business district, fell down an elevator shaft at a textile mill where he worked and was killed.

Three persons were carried down ladders to safety by firemen from their second-floor apartment as thick smoke drove some 40 others into the street.

TOM MAGNER.



Second Floor, Pacific Grove Fire Station

SERVICE AS A MAJOR FACTOR IN PROVIDING FOR FIRE SAFETY

Many Disasters Traced to Failure on the Part of Management to Give Safety Service

By A. C. Hutson*

SERVICE is a recognized factor in success. The hotel manager proudly speaks of the service given his guest. Storekeepers laud the service of clerks and delivery boys. The slogan of the railroads is service to their customers. The bankers and the brokers influence their clientele with paeans as to service rendered.

Of the many definitions of "service" given in the dictionary, the best is: "Service—performance of labor for the benefit of another."

The services mentioned above are primarily to increase the business or comfort of the individual. The service of greatest merit, however, is that which protects the life of the individual.

Holocausts occurring in this and other countries indicate that service to the individual has not received the attention which it deserves. Failures to transmit an alarm to the fire department, or to properly and quickly notify the occupants of a burning building, have occurred; exit facilities have been barred or not properly indicated; special protection has not been provided where needed; construction has been such as to permit the rapid spread of toxic gases from the burning materials, and other failures have occurred which have led to panic, and death or injury.

One of the reasons for these failures has been that fires, although large in total number, are of rare occurrence in terms of the life span of the individual. Many buildings have had life spans of one hundred years without a fire or with none of even moderate severity. In fact, few people have had an actual experience of rushing from a flaming building.

This absence of experience even tends to nullify laws and ordinances. Where protective equipment is mandatory, it may be of questionable quality. Not all of the holocausts have been due to failure of protective equipment, but it is evident that where such equipment is needed its failure might well be an outstanding cause of a catastrophe.

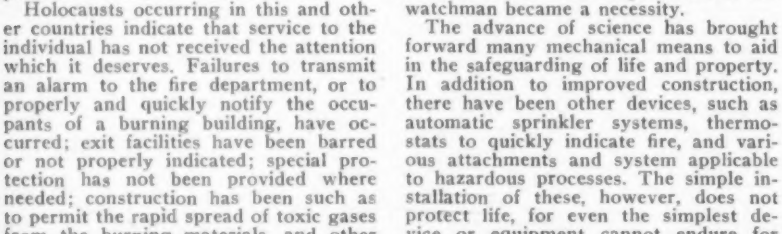
The service of a watchman for many years has been one of the means depended upon to safeguard life and property from injury and destruction by fire; however, even this service was far from complete, depending as it did upon the frailties of man. Supervision of the watchman became a necessity.

The advance of science has brought forward many mechanical means to aid in the safeguarding of life and property. In addition to improved construction, there have been other devices, such as automatic sprinkler systems, thermostats to quickly indicate fire, and various attachments and system applicable to hazardous processes. The simple installation of these, however, does not protect life, for even the simplest device or equipment cannot endure for long periods of time and be in an operative condition. Man, in his plans to protect others from fire, must provide a continuation of service beyond the initial installation. Without periodic inspection and testing and continuous maintenance, it is not possible to assure readiness for that time, maybe many years away, when their use will be needed.

It is in the field of assuring service of these and other protective equipment that the fire prevention bureau of American fire departments must extend their aid. To do this will necessitate the enactment of laws and ordinances, not only such as will require correction of faulty design or the installation of protective apparatus, but to assure that the owner recognizes their need and gives them proper servicing.

Although the members of the fire prevention bureau will need to have full knowledge of the characteristics of these various protective requirements, it will not be possible for the bureau to service them. This is a duty which must fall upon the owner or occupant. In some cases, proper servicing, as, for instance, seeing that doors on stair enclosures are kept closed, can be carried out by some employee. However, where the protection involves mechanical or electrical devices, as in a sprinkler system or an alarm system, the best form of service is that obtained under contract from the installer.

*Consultant on Fire Prevention and Fire Protection, 27 No. 21st St., East Orange, N. J.



New Fire Station for Charlotte, N. C.

Anyway you look at it, the new $55,000 fire station in Charlotte, N. C., is a far cry from the red brick barn where the fire horses used to listen for the alarm bell. This topside approach, made by the Haskell A. Deaton Flying Service, shows how the new structure blends with the residential character of the surrounding neighborhood. It is complete, except for finishing touches.—D. G. Spencer.

Five Saved by Life Net

A six-year-old Brooklyn boy, his home afire for the third time in his short life, jumped thirty feet from a third floor apartment into a fire net and then watched his mother toss his three-year-old sister and two younger brothers into the same net and, finally, leap to safety herself. Neither of the children—the youngest a 4-months-old baby—nor the 28-year-old mother was injured.

The fire burned out the two upper floors of the three-story apartment at 997 Blake street, in the East New York section of Brooklyn. The fire started on the second floor at 7:15 A.M., and by the time Engine Company 225 arrived, flames had cut off all exits to the street. Occupants of the second floor, who discovered the fire, managed to escape; another family on the third floor were cut off from the rear fire escape but managed to let themselves out a rear window and drop to the roof of an adjoining one-story structure.

Daniel Barrett, father of the children, left the apartment to go to his banana stand a few blocks away and he had hardly arrived there when a neighbor rushed up to inform him his house was on fire. He raced back and found flames and smoke pouring from the second floor, and framed in an open window directly above the flames he saw his wife and the four children.

At that moment Engine 225 arrived and, noting the fire escape and interior stairway were impassable, spread a net and encouraged Danny, the six-year-old boy, to leap. Emboldened by her son's safe landing, Mrs. Barrett tossed Linda, three; Richard, 14 months, and Perry, the youngest, into the net in succession. Then she stepped out of the window herself, found her long coat caught on an ornamental metal railing, jerked free and plunged to safety. None of the five was injured, although all were removed to a hospital for observation.

The Barretts lost all their belonging in a previous fire in 1945, and last year a fire in the same Blake street structure gave them a scare but caused little damage. The latest fire caused heavy loss, although firemen made short work of controlling it, once the tenants were all known to be safe.

According to press accounts this was the first time in 15 years that Engine Company 225 had used a net.

SPECTACULAR FIRE DESTROYS 96-YEAR-OLD RICHMOND MILLS

Firemen Prevent Extension to Modern Addition and Nearby Plants—Loss Over $1,000,000

A Staff Report*

FIRE on March 23, 1949, destroyed the two main buildings of the old Dunlop Flour Mills, ante-bellum landmark of Richmond, Va., on the James River, with loss estimated at $1,000,000.

The two buildings which burned were built in 1853 at the falls of the James River by the firm of Dunlop, Moncure & Co., whose members were James Dunlop, H. W. Moncure and Thomas W. McCance. The Dunlop Mills were among the earliest to participate in the flour and wheat trade with South America. In 1891, Dunlop Mills were purchased by Warner Moore & Co., who operated them for a number of years. The company was sold in 1936 to C. B. Stout, owner of the Dixie Portland Flour Company. Recently a large concrete elevator was added; it escaped the fire that took the two old structures which, ironically, survived the siege of Richmond in the struggle between the states.

The fire was discovered by the head packer at the mills, Charles Best, about 4:40 A. M. Best, one of 20 employees on the night shift, smelled smoke and upon investigating found flames issuing from the elevator building. The foreman shut down the plant at once, and an alarm was telephoned to the fire department. This was received at 4:43 A.M.

Acting Battalion Chief W. A. Morecock, responding on a still alarm with Engine 13 and Ladder 5, arrived at the scene about 4:45 A.M. He made his way to the fourth floor before encountering any fire. Returning to the first floor, the Acting Chief ordered, via his car radio, that box 613 be struck and that a second alarm follow immediately.

The box alarm brought Engines 7-17 (Eng. 13 and Ladder 5 having responded on the still). A minute later, the second alarm from box 613 brought Engines 2-3 and the Rescue Squad. A third alarm, sounded within another minute from box 613, called Engines 1-4. Fire Chief Finnegan responded on the second alarm as did Battalion Chiefs Cardwell and Luck, both of whom were off duty.

At 4:52 A.M. a special call went out for Ladder 2 and, at 4:56 A.M., water tower 1 was special called. A foam truck and two ambulances also were at the scene.

From the outset, firemen fought a losing battle, handicapped by the combustible nature of the old structures and their riverside location which made it impossible to fight the fire from the water side. The water in the river was too deep for wading, and too shallow for the harbormaster's small boat, the Mildred, which carries a pump and some hose. Fire fighters also faced an ever-present threat of explosion of collodial flour dust. Air flues and ducts installed to allay this threat aided spread of the fire.

At about 6:00 A.M. Chief Finnegan was encouraged to believe that the flames might be confined to the old 7-story elevator building, where the fire originated. However, his force of nearly 200 fire fighters, with 23 pieces of equipment were unable to hold the fire, which extended by way of the river side to that portion of the second building.

Firemen, however, were able to prevent any extension of the fire to the new concrete elevators.

Fortunately, there was no lack of water for fighting the blaze. Five pumpers took suction from a canal running between the mills and the Standard Paper Mfg. Co., less than 100 yards from the fire, to supply multiple lines. Two pumpers operated from hydrants. Hose lines were also supplied by pumps in the nearby Standard Paper plant.

Initial efforts to take hose lines into the old elevator building were frustrated by the rapid spread of the fire through the tinder-dry old structure. The building quickly became a mass of flames, which were fanned by a light wind, changing direction frequently. As fire broke through the roof, the city's downtown skyline was lighted up and spectators began arriving in droves. Traffic became snarled.

It was quickly apparent to Chief Finnegan and his aides that heavy streams would be required to hold the fire—if it could be confined. The department's ancient water tower was brought into play and, fed by six lines, it delivered two powerful streams from mast and deck turret into the upper stories of the old building.

Two aerial ladder pipes also were operated, one on the west side and the other on the south side of the structure. Firemen directed heavy streams from a vantage point on a one-story structure on the east side of the main building.

When the blaze had died down in the original building and it was thought firemen were gaining headway, Chief Finnegan ordered a company of men with a hand line into the fourth story of the second, or westerly building to wet the walls down, in an effort to further cover exposures. This move was defeated, however, as in a matter of minutes, flames burst into the structure through a wall. Firemen were forced to beat a hasty retreat, four of them sliding the hose line for the four floors to safety. None was injured.

It was considered providential that despite the long, arduous struggle, only two fire fighters were injured, neither seriously. Lieut. Joseph P. Corker was knocked from a ladder by a charged line to the roof of the one-story lean-to and thence to the ground. He suffered a wrenched knee. Fireman Linwood Lucas received a cut hand and sprained finger when a hose line snarled. Dr. R. L. Creekmur, Fire Department physician, cared for the men.

As the alarms went out, approximately 150 men of the off-shift came on duty and worked constantly through the day. Over 100 others, who were off duty and not subject to call, reported voluntarily and went to work.

It was six hours after the fire was discovered before it was considered under control. As late as 12:15 on the morning of the 23rd, Acting Battalion Chief E. L. Gibson and three companies

Fire Marches Unchecked Along Waterfront to Engulf Old Flour Mills
Richmond, Va., firemen, forced to fight hot blaze in 96-year-old buildings from only three sides, nevertheless save modern addition and other exposed plants.

*The editors are indebted to Tom Monday, Richmond, Va., for much of the data upon which this report is based.

Heavy Streams Confine Fire to Old Richmond Mills, But Loss is Heavy

Over 200 firemen, operating 23 pieces of fire equipment, fought six-hour battle before controlling threatening Richmond, Va., flour mills fire. Ante-bellum buildings had no sprinkler protection.

were standing by to prevent rekindle of the smoldering wreckage.

None of the equipment returned to quarters before 8:00 P.M. on the 23rd. Engine 3, a 1300 GPM unit, pumped continuously from the time of its arrival about 4:50 A.M. the 23rd until 1:30 P.M. the 24th, a period of 31½ hours. This pumper was purchased in 1927, and supplied four lines on the fire. It was operated throughout the operation by veteran engineers Pete Salotti and Harry Wilson.

The "backtap" signal, indicating control of the fire, was sounded by Chief Finnegan at 10:41 A.M. on the 23rd At 1:15 P.M. a part of the west wall of the old elevator, where the fire originated, collapsed. Soon after, most of the east wall fell. Firemen, forewarned, were not endangered.

During the fire, extra police were required to handle the crowds of curious, and reroute traffic. The Salvation Army provided refreshments for the hard-working fire fighters throughout the entire operation.

Safety Director Foster estimated that about 5,000,000 gallons of water were pumped onto the fire between 5:00 A.M. and 5:00 P.M. the day of the fire. In addition to the 22 lines of 2½-in. hose supplied by the pumpers, five 2½-in. lines were supplied by the electric pump at the Standard plant, about 100 ft. from the burning buildings.

Seven Charleston Firemen Killed in Dime Store Fire

Seven members of the Charleston, W. Va., Fire Department met death as a million dollar fire raged out of control for eight hours in two dime stores in that city on March 5. At least 15 other fire fighters were injured, two critically.

All the city's fire forces were mobiled on six alarms as flames swept through the three-story Woolworth Building and jumped tc the roof of the adjoining Kresge store. Aid was also sent from neighboring communities.

The fire, starting from an undetermined cause in Woolworth's, was discovered at 3:55 A.M. by police Patrolman Wayne Casdorph. First arriving firemen found the blaze centered in the basement at the rear of the store, which is reached by a winding stairway from the ground floor level.

Two fire companies attacked the fire, working down the circular stairway through dense smoke. Other forces attempted to ventilate while others stretched lines to the first floor. At 4:05 A.M. the floor above the men collapsed and tons of merchandise cascaded down upon them, burying most of the men to their armpits. A number managed to work free. Some with other rescuers struggled to aid less fortunate comrades, but the fire finally drove them out.

According to Fire Captain E. F. Merrifield, who managed to work his way out of the wreckage, the section of floor that caved in was about three feet wide and ran the full width of the building at the rear.

George Coates, a negro fireman, three years on the force, himself uninjured, went in after the trapped men, and never came out alive.

The bodies of the first two of the victims were recovered from the wreckage at 1:07 A.M. They were Firemen Frank N. Miller and Freddie Summers. The other bodies were recovered later. They were Firemen J. P. Little, Frank Sharp, Richard McCormick, George Coates and Emory Pauley. Confined to the hospital in oxygen tents were Capt. Charles Glendennin, overcome by smoke, and Fireman Carl Wiblin, seriously burned.

The two buildings are located on Capitol Street, the main business thoroughfare. The Woolworth building was burned out; the roof of the Kresge store was burned and partly collapsed. The Fleetwood Hotel next to Kresge's, and the Charleston National Bank Building, separated by a fire wall from Woolworth's, were damaged by smoke and water.

All fire department personnel was called into action by Chief J. Louis McLane of Charleston, who directed operations. Aid was summoned from Huntington, Dunbar and Marmet in the effort to control the fire. Carbide and Carbon Chemicals Corp. sent special gas masks to the scene as the acid smoke

Seven Firemen Lost in Charleston Dime Store Fire

A Woolworth store was gutted and a Kresge store badly damaged in early morning fire that claimed lives of seven Charleston, W. Va., firemen and injured 15 others. Picture shows fire before Woolworth store was fully involved.

from the burning contents made fire fighting a major hazard.

According to Chief McLane, the block where the fire occurred is nothing but a fire trap.

Special details of local police were aided by State police and national guardsmen in controlling the crowds of spectators and maintaining traffic. All gas and electric service in the vicinity was cut off.

A sad incident in the tragedy was the death of the veteran fireman Frank Sharp. Manning one of the hose lines throughout the fight was his son, Fireman B. L. Sharp, three-year member of the department, who knew his father had died in the basement.

NEW FOG APPARATUS DEVISED FOR CONTROLLING LARGE GRASS FIRES

New Idea in Mechanical Backfiring and Control of Fire Line Devised by Forestry Specialist

THE last frontier has been conquered. But not so the prairie fires which, in spite of the improvement in firefighting equipment and technique, still roll on their merry way, piling up an ever-increasing loss in range land forage, grain crops, ranch and farm buildings, erosion and human life itself. Lest this statement seem an exaggeration, it may be well to reflect for a moment on the great wildfire which, late in September, 1947, swept over 380,000 acres of rich farm land near Pierre, South Dakota.

This fire, or rather the combination of several fires which grew together, was not, in the beginning, unlike the thousands of other fires which annually start along the railroads and highways and byways of the country. What was different was that the fires started after a long season of drought, during a period of low humidity and that they were not put out while still small. The result, twenty-four hours later, was a loss in property estimated to be in excess of $2,000,000. No lives were lost. This was not the case, however, when seven months later another huge prairie fire roared across seventy-five square miles of Northeastern Colorado and Southwestern Nebraska. In this fire, four men lost their lives.

It is paradoxical, perhaps, that the settling of the West has not improved the situation. For the very roads and highways which make it possible to rapidly assemble manpower and equipment to fight fires also provide the means of egress over thousands of miles of flammable countryside. The careless smoker, a bit of burning carbon from an internal combustion motor, or a spark from a railroad brake shoe are causative agencies, to mention a few, which can, when conditions are right, start a prairie or grass fire on its destructive way.

So great has the danger become that in many areas firelines are bulldozed, plowed or disked along the railroad and highway rights-of-way in an attempt to confine such fires and keep them from escaping to adjoining fields and range lands. Not only are such firelines expensive to construct, but they also frequently prove ineffective in that their narrow width is not sufficient to stop the spread of an advancing fire when driven by even a moderate wind. Then, too, these lines, scraped to mineral soil, provide an excellent seed bed for the surrounding grasses. The result is that the process must be repeated the following year. In time the firelines become ditches and, aided by erosion, sometimes wash out to a depth of four feet or more.

Cheat Grass a Plague to Firemen

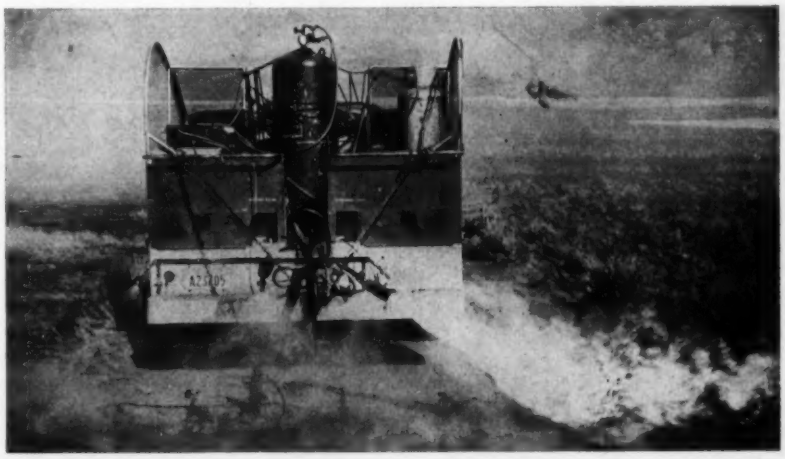
Farmers can take out fire insurance on their grain fields but, win or loose, someone has to foot the bill. Recent studies made in Oregon, where cheat grass, a very flammable annual, is now entrenched on at least 10,000,000 acres, indicate that a cheat range is five hundred times more likely to burn than a non-cheat range. Cost figures for fire control, including the value of the lost forage, is given as ten cents per acre per year in the fire-hazard area. And cheat grass is now present to a greater or lesser extent in all of the western states, except Arizona and New Mexico.

What could be done about it? A. B. Everts of Seattle, Washington, thought the answer might be in the proper equipment. During his twenty-five years with the United States Forest Service he has had an opportunity to observe fire behavior all along the Pacific Coast. He knew that it takes a relatively small amount of moisture to control or extinguish a grass fire. But grass fires are fast spreading, and frequently develop long fingers. To cut across these fingers would shorten the line, but the effect of the moisture applied would be of short duration. This suggested backfiring. It also suggested mechanization. What was needed was a fast attack unit which could move down the highway at the allowable speed and, on reaching the fire, could go into action with the least amount of delay. Out of this idea has come what the inventor calls a "Firefog Unit."

After three years of effort and four test models, the firefog unit is ready for action. The greatest difficulty was to find a satisfactory backfiring torch. The torch had to be one which required no preheating, was economical in use and which would provide a continuous blast of from fifteen to twenty feet in length. In his search for a torch Everts met another Seattle man who had the answer. W. C. Cheney had been manufacturing industrial torches for years and he was, at that time, experimenting with the idea of combining propane and Diesel oil to produce an exceedingly hot flame. The feature of the Cheney torch is that it utilizes the propane to pressurize the oil in a separate tank. Thus no pump or motor is necessary. One hose line carries propane to the torch and another one carries the gasified oil. This arrangement made it possible to adjust the oil and gas mixture at the torch so that a very hot blast would result. Or the gas could be turned down and the oil turned up so that a trail of burning oil would be left along the line to be backfired.

Device Combines Backfiring and Line Control

With the torch decided upon, Everts next turned his attention to the water problem. The water use must also be economical, not dissipated by the wind, and still suffice to create an artificial raise in the relative humidity of sufficient duration to allow the backfire torch to blast the fuel away from the line to be held. It was obvious that a wider strip would need to be wet down,



Firefog with the Backfiring Torch Partly Turned On. Center Tank Contains Diesel Oil Which Is Pressurized by the Propane Gas in the Tank to the Right. Control Box Is on the Left. Five Fog Jets Wet Down an Eight-Foot Wide Control Line. When the Tank Truck Is in Motion, the Flamethrower Can Be Turned on to Produce a Longer Throw, Which Blasts the Fuel Along the Edge of the Control Line and Starts the Backfire

and consequently more water used, on the lea than on the windward side and flanks of a fire. In addition, the water application should be adjustable for height—effective application would be lower for cheat grass than for waist high grain fields. The amount of water used can be adjusted by the shut-off cocks on each of the five fog or spray jets, or by changing the jets themselves. The height of the water is adjustable by raising or lowering the water bar. In the latest model a strip can be wet down from two to eight feet wide using from two to forty gallons of water a minute. Thus the unit is readily adjustable to the fuel types encountered and weather conditions prevailing.

The unit will operate with any tank truck capable of pumping water while the truck is in motion. The larger capacity tankers with four or all wheel drive are the most effective and can operate on terrain up to thirty per cent slope. The Firefog unit is attached to the rear center of the truck by means of a universal joint. It is held in a parallel position by means of a bridle and two chains. A skid bar is provided to protect the unit on rough ground. As soon as this bar strikes an obstruction, and raises, the universal joint allows the unit to swing to one side or the other, preventing side torque. Once the obstruction is cleared, the unit settles back in position, on its chains again. Thus the entire unit is capable of automatic adjustment.

An aluminum control box containing the gas-control valve, oil-control valve, water shut-off, water strainer, and batteries, coil and mechanism for lighting the torch, is carried on the rear of the truck. Thus the entire unit can be operated from the truck, including the lighting of the torch. The only time it is necessary to leave the truck is when the torch and water bar are shifted from one side to the other or when more or less water jets are needed.

Field tests with an earlier model resulted in the backfiring and holding of cheat grass fires at the rate of eight miles per hour. It is believed the new unit will better this record.

While the original idea of a unit of this kind was to fight prairie fires, the inventor hopes that its use will prevent fires from starting, in the first place, by fireproofing roads and highways and railroad rights-of-way.

When Not in Use, the Firefog Unit Is Swung Up Against the Rear of the Tank Truck. Thus It Is Not a Hazard to Highway Travel When Making a Run to a Fire. It Can Be Put Into Operation in a Few Seconds Upon Reaching the Fire

Radio Helps Fight Louisville Fire

When a 60-year-old building housing paper box manufacturers burned in Louisville, Ky., fire and police radio-equipped vehicles proved a great asset.

About 8:10 A.M. occupants of a police prowl car discovered flames and smoke shooting from the top of a 5-story building at 117 N. 6th street, Louisville, occupied by the Kentucky Paper Box Company and Finger Paper Box Company. An alarm of fire was promptly radioed from the police car.

At almost the same time, Box 48 at Main and 6th streets was pulled, which brought on the first alarm Engines 2 7 and 5 and Ladders 1 and 2 and the water tower.

Assistant Chief Harry Ellington, en route to the fire, while still five blocks away, observed its severity and using his own car radio ordered second and third alarms to be sent in. The second alarm called for four pumpers and another ladder, and the third alarm for four more pumpers.

Upon the arrival of Fire Chief John Krusenklaus, additional pumpers were summoned. Before the fire was controlled the fire department is reported to have used seventeen companies, with fifty fire streams.

The combustible old building is separated from the adjoining Otis-Hidden Compa- by only a party wall, and fire might have communicated to that structure but for the fact that some years ago a water curtain system had been installed, and this was placed in operation, effectively preventing any extension of the flames in that direction.

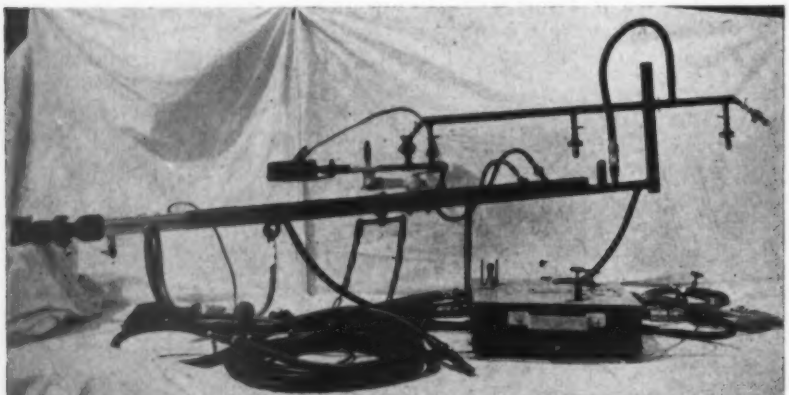
The rapid spread of the fire is attributed to an open, large elevator shaft which drew the fire quickly into the 4th and 5th floors. Loss of property was estimated at $250,000.

In reporting on this fire, FIRE ENGINEERING's correspondent, Mr. V. A. Beam, Coordinator of Firemen's Training, Frankfort, Ky., said that an aluminum ground ladder with two men on it, collapsed during the progress of the fire. According to his account, the ladder—28 feet in length—was not heated and it appeared to buckle. Neither man was injured as both were able to clear the ladder.

From this correspondent's report, it would indicate that the ladder in question was not a fire department ladder. Neither he nor Chief Krusenklaus knew whose ladder it was. As an outcome of this mishap both cautioned that in the purchase of aluminum ladders for plant use, only standard fire department type aluminum ladders should be ordered.

Because of the terrific start which the fire had the fire department could do no more than protect exposures and prevent the spread of the flames. In this operation, turret, water tower and ladder pipes were used, as well as hand lines from the streets and from surrounding structures.

All off-shift firemen were called in to man the auxiliary equipment as standby protection. Extra police, also, went on duty to control the large crowds of the curious that filled the area.



Detailed Photograph of Back-Firing and Firefog Equipment

Just forward of the skid bar a rubber snubber is shown. Its purpose is to prevent the unit from bouncing up on rough ground. At the same time it allows upward movement if the skid bar strikes an obstruction. The water bar can be raised or lowered on the pipe extension. All the fog or spray nozzles have individual shut-off cocks and adjustable tips. The coil of hose in the foreground is for emergency use in case the truck should stop suddenly. The operator can use this hose line to keep the fire from spreading under the truck.

Odd Fatality by Fire

Mrs. Euphrenia Sanderson, 65, Phoenix, N. Y., died in a Syracuse hospital from third degree burns of face, arms, chest and legs following an effort to heat a combination of turpentine and lard, for use as a chest preparation for her husband.

The preparation was being heated on the stove on the second floor rear kitchen in the Phoenix Hotel. Her clothing flamed when the hot liquid suddenly flared up and splashed on her. The manager of the hotel, Sam Bromstein, extinguished the fire in the victim's clothing before it spread to the hotel. He was burned in the operation

Cincinnati Makes Fireboats Out of Army "Ducks"

The late Joe Penner's plea: "Anybody wanna buy a duck?" comes to mind with the report of the recent action of the Cincinnati, O., Fire Department in acquiring a pair of war surplus Army "ducks"—those clumsy looking amphibians that travel on land and water.

Purchased from a Cleveland dealer in war surplus commodities at a reported cost of $1,500 each, the "ducks" will be refitttd as fireboats, to aid the department combat waterfront fires, and fires during floods.

According to Fire Chief Barney J. Houston "the boats will be of inestimable value in fighting boat fires. We've never been able to get on the stream side of a boat fire. When we fight a boat fire from the bank we merely drive the fire to the exposed river side. With the 'ducks' we can fight such a fire from both sides."

The craft will be equipped with gasoline-driven pumps capable of delivering 500 GPM, taking suction directly from the river. Two turret nozzles will be mounted, one fore and one aft.

The first "duck" has been delivered and is housed at the Workhouse Municipal Garage, in Cincinnatti, where city workmen are renovating it for fire department use.

Department plans include training personnel to man and operate the novel craft. Each boat will have a five-man crew. The vehicles are said to be capable of speeds of 50 MPH on land and 8 to 10 MPH in water. It is expected that the completed new units will be housed at the proposed new firehouse at Ninth St. and Broadway. A hydraulic lift is to be built into the firehouse to permit lowering and raising the "ducks" to and from their proposed quarters in the basement of the building.

Chief Houston said that when the boats have been completely equipped the total cost will be about $3,500 apiece.

Fire Waste Council Sees New Radio Fire Alarm System

What may mark a new era in fire alarm communications was demonstrated on April 8, 1949 to members of the National Fire Waste Council, at the University of Maryland, College Park, Md.

The Radio Fire Alarm System, as it is called, is a further development of the rural radio alarm system described in the November, 1947, issue of FIRE ENGINEERING and which was demonstrated before the convention of the International Association of Fire Chiefs in New York that year.

The system has particular application to non-urban areas where, because of cost or other installation difficulties, it is considered impractical to apply the conventional wired fire alarm system, in general use in American municipalities.

Hugh Leaming, president of the company which was founded in upper New York State to develop the radio alarm, explained the new system to members of the Fire Waste Council and others.

The alarm consists of a small battery-powered radio transmitter with an effective range of three miles. The transmitter is mounted in a compact metal box. To transmit the alarm, one simply pulls the radio alarm box's small external handle, very much as is done in transmitting an ordinary street box alarm in any city. After a delay of four seconds (in which time it takes the radio's tubes to warm up) it sends out impulses which are picked up by a fire station receiver which, in turn, activates a siren mechanism. A series of tones or signals identify the transmitter and the location of the fire.

Up to 50 transmitters may be installed to operate with a single receiver. The activation of a radio alarm box will automatically trip the alarm siren or horn, turn on lights and at the same time be made to indicate on a tape recorder and tapper-bell, the exact number of the alarm box "pulled." The mechanism will transmit four complete rounds of its number.

The new system operates on the low power channels allocated to the fire service for walkie-talkie, portable low-power service and no interference is reported experienced between this service and voice. It is said the radio fire alarm box and the conventional alarm box are similar in most characteristics, including appearance and operating procedure.

In addition to its application in non-urban areas where at present the telephone or messenger is the sole means of transmitting alarms of fire, the radio alarm system should find a place in the protection of ships in port, by helping solve the problem of notifying the fire service and other emergency forces.

Chief J. W. Just, Director of Fire Service Extension Department, University of Maryland, in the fire station of which the radio alarm was shown members of the National Fire Waste Council and others, termed the system "the answer to the small community's prayer." H. H. Friede, representing the International Municipal Signal Association, said: "This radio alarm is the greatest scientific boon to the fire service since the invention of the telegraph."

According to Mr. Leaming production of the new alarm system should be under way "within five months."

Wage Boost for Oswego Firemen

For the first time in 18 years, Oswego, N. Y., firemen have been given a salary increase, it is disclosed by James R. Jackson, city alderman.

This increase was secured without any public campaign or a taxpayer's election. Twice previously, efforts to secure increases by election met with failure.

Here is the schedule of pay for Oswego firemen:

	1946	Bonus	1948	1949
Fireman ...	$1,800	$300	$2,400	$2,600
Lieutenant .	1,830	300	2,600	2,800
Captain	1,875	300	2,700	2,900
2nd Asst. Chief	1,980	300	2,800	3,000
1st Asst. Chief	2,040	300	3,000	3,200
Chief	2,800	300	3,600	3,800

In addition, firemen this year will work 60 hours as against a former longer work period.

Chicago F.D. Ambulance Gets Radio

After the crew of Chicago, Ill., Fire Department Ambulance 8 performed an "outstanding service" for a member of Post 271, American Legion, that organization presented the department with a two-way radio for the same ambulance.

After the $500 set was installed, a dedication ceremony took place, during which Chicago Fire Commissioner Michael J. Corrigan formally accepted the gift.

"We need radios badly," comments Capt. Joseph J. McCarthy, in charge of the ambulance service and a former Marine Corps Captain who won the

New Radio Fire Alarm Demonstrated at University of Maryland

Shown here is the station receiver and register and bell which the radio-alarm activates. Seated is Chief J. W. Just, Director, Fire Service Extension, University of Maryland; Herbert A. Friede, Superintendent of Communications, District of Columbia, and Hugh Leaming. The radio fire alarm box, similar to the conventional wired alarm box, is not shown.

Congressional Medal of Honor at Iwo Jima. "When the Legion asked me what it could do I suggested a two-way radio."

Ambulance 8, located at 5220 S. Western Ave., is one of a fleet of 10 operated by the Fire Department. In the first 11 months of 1948 the ambulances answered 5,270 calls for aid and 137 multiple alarm fires.

The Fire Department hopes eventually to equip the cars of all officers, rescue squads and ambulances with two-way radios.

"We've only made a small start," explains Chief Mullaney. "A number one problem is the cost of setting up our own radio station. I believe, however, that if we got a system, it could be consolidated with the police department radio which now transmits our limited calls."

In addition to Chief Mullaney's desire for the Department's own radio, he would like to install radios on every pumper and truck company. Moreover he favors development of "walkie-talkie" portable two-ways for use at fires.

PAUL C. DITZEL

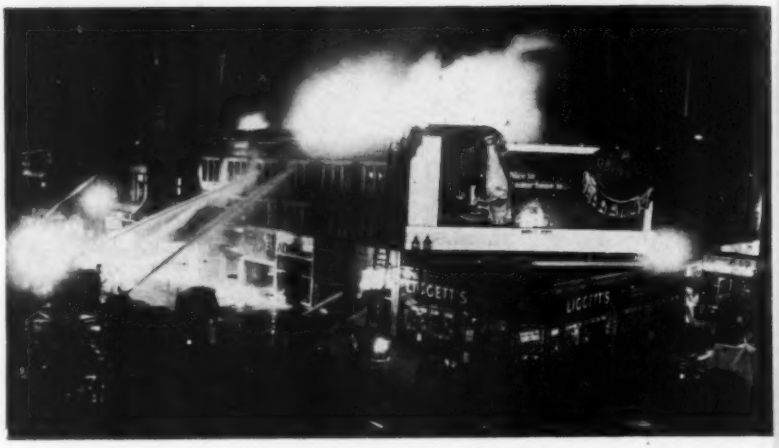
Toronto "Box 12" Active

Toronto is believed to be the first city in Canada to have an organized group of "Fire Fans" or "Buffs." Organization was completed in February of this year, of the Toronto Box 12 Association.

The organization takes its name from the fact that the largest fire in Toronto's history occurred in 1904, with a loss of over $9,000,000.00, and was first reported from Box 12, at the corner of King and Bay Streets.

Like most "Fire Fan" organizations, prime interest of the group, which includes business and professional members, is to render any possible assistance to the Fire Department of the City when called upon by Fire Chief Peter Herd. Ultimately, the association hopes to establish a coffee and sandwich service for members of the Department on duty at multiple alarms. The second basic interest of the group is to sponsor a collection of historical data relating to the history of the Toronto Fire Department. This, of course, would include such items as old photographs, badges, helmets, uniforms, trumpets, etc.

The association meets monthly. Arthur C. Fox is Chief of the Box 12 Association.



Heavy Loss in Minneapolis Hotel-Store Fire

Flames break through roof of Hotel Majestic in downtown Minneapolis as firemen of 4-alarm assignment wage 10-hour struggle to end conflagration threat.

Minneapolis Hotel and Stores Burn with Heavy Loss

Minneapolis, Minn., which has had more than its share of destructive fires in the past twelve months, suffered another costly fire in the burning of the Hotel Majestic and multiple business places at Hennepin Ave. and Seventh St. on March 17.

The fire originated in the kitchen of the Bridgeman Ice Cream store, which is located in the "L" shaped hotel building, at 11:49 P. M. First notification of the fire came through an ADT system, when heat set off the automatic alarm. Firemen, who arrived promptly, found flames under a false ceiling of the ice cream store and spouting into the hotel vents.

Additional alarms were sent in at 11:56 P. M. and 12:01 A. M., and a fourth alarm was transmitted at 12:28 A. M. All off-duty firemen were called and four St. Paul fire companies moved in to Minneapolis stations and stood by.

The blaze quickly swept through the hotel, which occupies the second and third floors, and into adjoining stores on Hennepin Ave. Forty guests of the hotel escaped or were removed without injury, although three firemen were injured, one seriously, in fighting the fire. One fireman was struck in the face by a hose nozzle.

Almost total losses were reported by the Hanover Shoe and Adams hat stores, and heavy damage at Vermes jewelry store. Good use of salvage covers prevented heavier losses in this occupancy. The wall of the ice cream store collapsed against the Gopher Theatre, which is next door. On the Seventh Street side, the hotel lobby and bar, Lacy's Credit Jewelry store and the Dotty Dunn hat shop were damaged by smoke and water as was a Liggett's drug store on the corner. The theatre was undamaged except for a flooded basement.

Fire Chief George S. Lockhart is said to have estimated the loss at about $750,000.

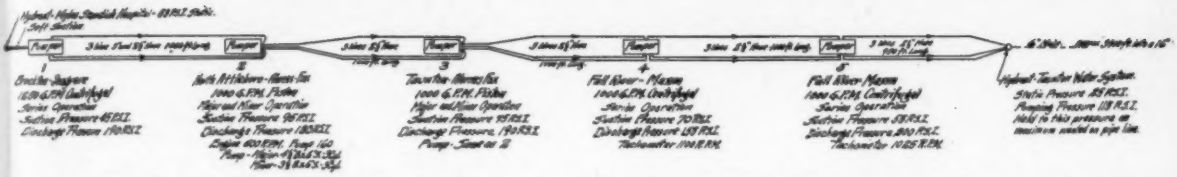
Six Dead, 47 Injured in Church Explosion

Escaping "bottled furnace fuel gas" was given as the cause of the explosion that wrecked St. Mary's Roman Catholic Church in Marion, S. D., on Palm Sunday, April 10, 1949. The brick church was shattered as elderly parishioners knelt in prayer a few minutes before 9:00 A.M. mass. Only the entrance bell tower remained standing. Fortunately, there was no fire and firemen and volunteer rescuers were able to quickly remove the dead and injured, many of the latter in critical condition. Injured were taken to Sioux Falls, Mitchell and Yankton.

Wet Water Wins Over Stubborn Fire

A minor but stubborn fire that smoldered for several days in the 25,000-bushel storage-bin of the Alhambra Grain & Feed Company, Alhambra, Ill., was reported smothered by the application of water treated with a wetting agent, according to Fire Chief Harold Landlot of Alhambra.

After trying the usual orthodox extinguishing methods, including removal of about 1,000 bushels of beans from the bin, firemen added the solution of wet water and forced about 200 gallons into a small opening at the base of the concrete bin, filled with soybeans. That did the trick.



For 22½ Hours, This Fire Pumper Relay Covering Nearly One Mile, Delivered 600 GPM Emergency Supply to Taunton, Mass.

Mile Relay Supplies Taunton

Ignoring sound water works practice, and the pleas of Superintendent of Water Works, for much needed improvements during recent years, Arthur C. King, the city of Taunton, Mass., had to get along with inadequate water supply for nearly two days, when the city's thirty-inch supply main broke on March 11, 1949.

In the emergency, fire pumpers from Taunton and neighboring cities were placed in service, to temporarily supply water to a hydrant of the Taunton system through three lines of 2½-in. fire hose a mile long from the State Hospital system.

For 22½ hours the fire pumper relay delivered 600 GPM emergency supply to Taunton, while water works engineers and crews worked feverishly to repair the break and minimize the threat of fire which persisted during that period of shortage.

The hookup is shown in the accompanying diagram.

Cleveland Firemen Get Special and Advanced Training

The Cleveland, Ohio, fire department is pushing forward its plans to make its organization second to none. Chief Granger, backed by Mayor Burke some months ago touched off an improvement drive that called for new apparatus, new fire stations, added manpower and improved communications to revitalize, expand and modernize the department. The aim, according to Chief Granger, was to secure for the City a class 2 rating from the National Board. of Fire Underwriters. For the past 17 years Cleveland has held a class 3 rating.

Cleveland Fire Lieutenants Practice First Aid

Practitioners and "victims" in this class are all lieutenants of the Cleveland Fire Department, receiving schooling in the department's special advanced training course.

To further personnel in firemanship the fire department has instituted a school for special and advanced training for all departmental members, located at Fire Station 1, 330 W. St. Clair avenue. The School meets four mornings a week, three hours at a session. The school year lasts four months for each class. Directing the training is Battalion Chief Emmett Byrne.

Already the battalion chiefs and captains have had the rigorous schooling which involves all modern methods of fire fighting and fire prevention, including first aid. Currently 138 lieutenants are taking courses from special instructors within and outside the department in such things as building construction, inspection, hazards and so on.

Said Chief Granger: "Science and industry constantly are introducing new fire hazards and the men are learning new methods to cope with them."

Oakland Fire Set "On Impulse"

The $1,000,000 Oakland Army Base pier fire, described in the April issue of FIRE ENGINEERING, was set "on impulse" by a sentry, the Army announced.

The 18-year-old private said he started the fire with a cigarette lighter—touching it to some burlap wrapping. "I did it on impulse, not thinking what would happen" he was quoted as saying.

The Army will prosecute the soldier on charges of destroying Government property.

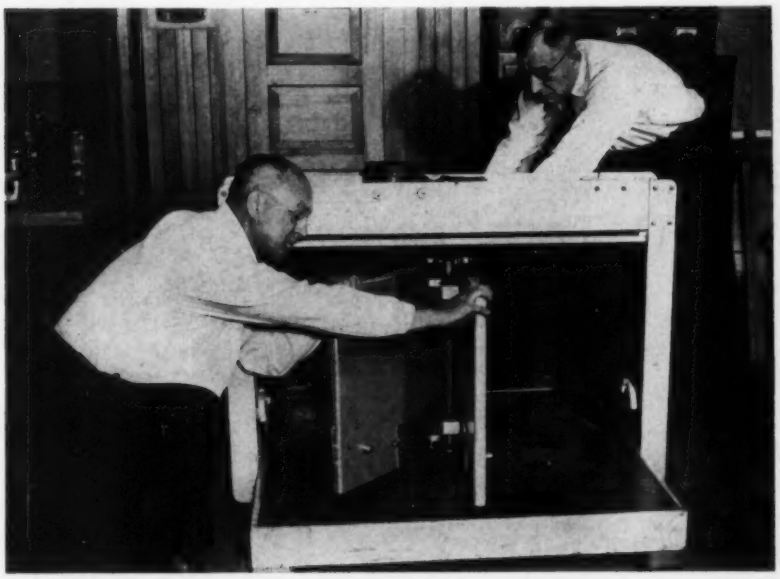
Hazards in One Third of Ohio Schools

Inspectors found fire hazards in more than one-third of 636 Ohio colleges, universities, public and parochial schools, according to state industrial relations director, Albert A. Woldman.

The director said: "Conditions were so hazardous it was necessary to issue mandatory orders to 54 colleges and universities and 169 public and parochial schools." The orders demanded that the institutions eliminate the hazards found by inspectors, which surveyed 151 colleges and universities and 485 public and parochial schools, according to Mr. Woldman.

Nine principal fire hazards were uncovered, Mr. Woldman said. They were: Inadequate number and improper means of leaving the building, and obstructions to exits; inadequate and improper fire escapes; failure to provide standpipes and fire escapes; failure to provide proper fire alarm systems; failure to install wiring in conduit or in accordance with the 1940 National electrical code of the National Board of Fire Underwriters; failure to provide fireproof heater and fuel rooms; failure to provide exit lights and signs; defective flues, and failure to maintain fire extinguishers in operating conditions.

The fire hazard survey followed soon after the disastrous Kenyon College dormitory fire of Feb. 28, in which nine students perished.



What's What in a Panic-Proof Door?

Captain John Denk (right) and Lieut. Alfred Colberg probe the "innards" of a panic-proof revolving door as part of their training in the Cleveland Fire Department's new school of instruction.

Short Cuts and Gadgets

STANDARDIZATION IN ORDER?

William Curling of Portsmouth, Va., comes across with a suggestion that has been offered many, many times—one so logical that it would seem all fire departments would long ago have adopted it. Inasmuch as they haven't, however, we're constrained to repeat it here and now, in his own words:

"After reading 'Short Cuts and Gadgets' in FIRE ENGINEERING Magazine for several years," writes Brother Curling, "I wish to make a suggestion. Would it not be a good idea for chiefs to arrange all equipment on different companies in the same place (on apparatus) thus making it possible for members to go to a different company for equipment in case of a large fire (and find it more quickly)? This would eliminate a lot of lost time fumbling around in the darkness."

The editors would like to point out that not all fire departments have failed to adopt this idea. Many follow the plan implicitly. Some others have encountered difficulty following it due to the variation in the types of equipment and apparatus purchases.

We'll add just one more thought: some departments require each company to chart or diagram all basic equipment on its apparatus, and the company personnel is drilled repeatedly so that members can go to the apparatus in the dark, locate and remove any tool or piece of equipment.

* * *

TO MAINTAIN CONTACT

Here's a "Short Cut" sent by Norman Zeek, Milton, N. J., which is worth passing along, although we may not see eye-to-eye with him in his comparison between the portable telephone and radio walkie-talkies. He writes:

"In the October, 1948, issue of FIRE ENGINEERING there was an article on various types of communications for fire departments. Our fire department (Jefferson Township F.D. No. 1) has another type of communication. This is mainly for use between pump and nozzle but can be used on other locations.

"We purchased two Army field telephones and ½-mile of Army field wire, complete with reel. We mounted this reel in a basket right behind the cab. One phone is located by the pumper; the other is connected to the telephone wire. After the wire is pulled from the truck, it can be pulled out when laying hose or pulled out separately.

"We have midget electric plugs for quick connections. In this way we have complete communication between the pump and nozzle end of hose at all times. This is a good set up for country towns like ours where sometimes the truck is out of sight from firemen using nozzles. On walkie-talkies or handy-talkie systems you have two men tied up carrying these units, where, on the phone system, you only have one. Each phone is complete with bell for calling purposes.

"This same system is used by Mt. Arlington, N. J., Fire Department which, we believe, was the first to use it. If any fire department wishes any additional information on this, it will be gladly given. It may be inspected by anyone who wishes to come and see it."

Editor's Note: The telephone has its advantages, no doubt, but it is not comparable, either in convenience of use, range or other features, with two-way radio as now available to the fire service in the latest walkie-talkie sets, designed and built to meet fire service needs.

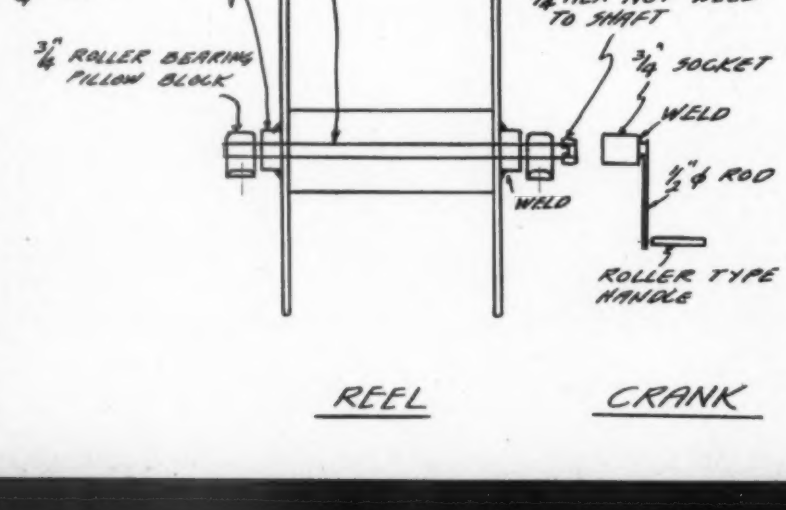
SODA ACID
USE ONLY FOR FIRES IN WOOD, RUBBISH ETC.
DO NOT USE ON ELECTRICAL FIRES
PYRENE
GOOD FOR ANY TYPE FIRE – BEST FOR ELECTRICAL FIRES
Carbon Dioxide (CO_2)
FOR ELECTRICAL FIRES OR SMALL OIL & PAINT FIRES
FOAM
USE FOR OIL AND PAINT FIRES OR RUBBISH FIRES
DO NOT USE ON ELECTRICAL FIRES
TURN UPSIDE DOWN!
PUMP THE PLUNGER
TURN UPSIDE DOWN!

FIRE EXTINGUISHER BOARD

Several good ideas for mounting fire extinguishers in industrial occupancies have been described and pictured in these columns in the past. Here is another installation, this one used by the Western Tool and Stamping Company, Des Moines.

The picture tells the story very well. Mr. J. E. Kolls, vice-president of the Company, says: "We have had considerable local comment concerning the use of our fire extinguisher boards and the idea has been observed to work quite satisfactorily in our own plant in the instance of one small fire. They being strategically located throughout the plant, every employee knows without thinking where these fire extinguisher boards are located and hence, without thinking, will immediately run to their location in case of fire. We have found that in addition to these boards of extinguishers, two-gallon buckets of sand should be equally available. We feel confident that should any other company adopt similar fire preventive devices, they will find them to be very satisfactory."

Note the placards on the board, which tersely explain the uses and methods of operating the respective extinguishers. Fire Chief Charles Slade of Des Moines has praised the Western Company and Mr. Kolls for their enterprise.



The WATCH DESK

Overhauling the firemanic news of the day

by ROLLO WOOLLEY

Our Orchids for the Month

That lad who stood on the Burning Deck had nothing on Robert Goforth (what's in a name!) who had only a second or two to decide how to save the lives of a lot of people, and incidentally his own.

Mr. Goforth had a case of 25 sticks of dynamite in the rear of his jeep, to be used in blasting utility pole holes, as he was going forth for his employers, the C. & D. Construction Co. of Louisville, Ky. He pulled in at a gas station at Paoli, Ind., and Earl Lane, Jr., the station attendant, was pumping gasoline into the jeep's under-the-hood intake when the fuel ignited, apparently from a battery spark. The jeep caught fire and the flames spread rapidly toward the dynamite.

Mr. Goforth though fast. There wasn't any chance to get the explosives out of the jeep. He could run and save his own life.

Maybe he could yell to Mr. Lane and they could both run. In either case, the dynamite would explode, setting off the service station's gasoline tanks and nearby houses would catch afire.

Mr. Goforth, who is middle aged, leaped into the jeep, started the engine and threw it into gear. The jeep roared down the street 100 feet to a point where the explosion could not set any houses on fire. Mr. Goforth barely got clear before the dynamite blew up. The jeep was destroyed by the blast, which did little other damage.

Orchids to Brother Goforth!

* * *

Who Called Them the Weaker Sex?

Over in Philadelphia, Fire Captain Charles Hacker of Engine 9 in Germantown, was on duty one night when the telephone rang. It was Mrs. Hacker calling.

"Our house is on fire," she informed the captain. The latter dispatched fireman Richard Blackman to the Hacker residence at 248 E. Slocum St. to check up. Blackman did so, in a private car, sans fire extinguishers, tools, ladders or whathaveyou.

The lone fire fighter found Mrs. Hacker pretty well tuckered, and about ready to chew off her fingernails. She'd been fighting an honest-to-goodness blaze in her kitchen, which destroyed the curtains and damaged a new dinette set. Un, huh! with the aid of a chemical extinguisher, and no help from the captain, or anybody else, we're told, the "little woman" had succeeded in dousing it.

Leave us draw the curtain on what Mrs. H. said to the captain when he finally arrived to view the wreckage!

* * *

Ex-Paratrooper Performs in a Pinch

When Louis Alonzo, 27, unemployed ex-paratrooper was trapped on the third floor of a burning Brooklyn, N. Y., tenement with his wife and two small children, his skill in tumbling from the skies in the last war stood him in good stead.

Leaping from a window to a dirt yard, forty-five feet below, Alonzo first caught the youngsters, one four and one ten months old, as his wife tossed them to him. Then he broke the fall of his wife, who weighs 140 pounds, when she leaped. The impact threw them both to the ground.

All four were taken to Cumberland Hospital where Mrs. Alonzo was treated for fractured ankle and a back injury. The others were released after the youngsters were treated for scratches and minor cuts.

Apartments on the two top floors were burned out by the fire, which started in a second floor apartment when a defective kerosene stove exploded.

* * *

Woman Firebug Dies

The midwest's most fabulous woman firebug, Maude Lucas Ott, 45, died in March in a paroxysm of madness in a Logansport, Ind., institution.

She will be remembered as the homely, bespectacled heroine-villain in two of Indiana's major institutional fires, one of which took nine lives and caused $3 million in property damage. The other imperiled the lives of 1,000 patients, several of whom she carried to safety in her strong arms.

Maude Ott led a double life that baffled experts on schizophrenia. She, herself, said: "There's something about a fire that makes me quiver and feel good."

Logansport residents, after her death, recalled the night of Feb. 23, 1944, when the woman's section of the Logansport state hospital became an inferno. Maude, one of the institution's attendants, soothed the terror-stricken with words of courage, helped them dress and removed many bodily to safety.

Investigation showed the fire was touched off by matches applied to a pile of kerosene soaked newspapers in the basement. Then one of the dozens of hospital attendants questioned dropped a bombshell. She said: "I saw Mrs. Ott running from the basement just before the fire." Investigators then re-checked the fire that destroyed several buildings and killed nine persons at the Evansville, Ind., State Hospital the night of Feb. 9, 1943, and blamed her for this tragedy, also.

* * *

Florida Fire Gets Plenty of Vitamines!

Florida, which is accused of doing 'most anything to get its fruit products into the limelight, and into the customers' hands, didn't actually stage this stunt, so 'elp us.

In Zephyrhills (what's in a name), a truckload of crate material took fire. A first aid hand extinguisher wasn't equal to the task of extinguishing the fire and the Zephyrhills Fire Department was called. The vamps used the contents of its only booster tank—300 gallons—on the fire. That failing, firemen called on a nearby citrus plant for help.

The citrus plant sent a tank truck of discarded orange juice to the scene. The Zephyrhills pumper was hooked onto the truck—and zowie, the vitamin enriched booster line did the business!

Now you tell one!

(Thanks to all who sent this item.)

Hot Off the Tape

In Kansas City, Mo., two brothers were burning a pile of scrap metal when a copper tube from a discarded gas refrigerator exploded, scattering the debris. One brother suffered lacerations, the other a fractured arm and cuts. . . . Mrs. Elizabeth Bowers, 75, of Saybrook, Ill., placed a hot iron in her bed for warmth. She burned to death. . . . In Indianapolis, Ind., a police car "exploded," two detectives narrowly escaping death. Firemen extinguished the fire which ensued. . . . Near Bloomington, Calif., an eloping young couple died by fire when a truck plowed into the rear end of their car, exploding the gas tank. . . . A two-year-old baby girl burned to death in Camden, N. J., when a five-year-old brother, playing with matches, ignited the baby's crib. . . . In St. Louis, 31-year-old Robert W. Mahon, a welder, wants to know how many teeth a fireman has to have to "eat smoke." The fire department, taking on some 200 men, got an application from Mahon, who has no teeth of his own but a good set of artificial choppers. Contending he was turned down with "an arbitrary and capricious ruling" solely because of his false teeth, Mahon sued for the job. . . . Roberta Lee, 14, of Chicago, who rescued her three brothers and a sister from a fire, being badly burned in the effort, is getting her deserved reward—a home to replace the burned one; skin for grafting to her injured body; a pony and more than $7,000 in cash thus far. . . . A jury in a Detroit traffic court decided that Alex E. Berendt, managing director of the College of Advanced Traffic, where truck operators are taught road safety, doesn't allus' practice what he preaches. Jury found Berendt guilty of leaving the scene of an accident. . . . Utica firemen extinguished a fire in an overheated furnace pipe. Cause was attributed to a celluloid toy which ignited in a register in the home. Damage confined to toy and pipe! . . .

Cheers! A Bronx, N. Y. C., worker was fined $50 for smoking in the children's underwear factory where he worked. Sez Magistrate Peter A. Abeles: "Nobody can smoke in a factory and jeopardize the lives of people there"—and gave culprit the limit. Kudos also to Fire Lieutenant Thomas Brown of N. Y. F. D. Bureau of Combustibles for sticking by his summons book. . . . A posey for Charles W. Evanst, 28, Ohio Bell Telephone Co. employe who carried a woman and her four-year-old niece to safety from their burning home, then quietly vamoosed without giving his name. . . . Last wish of Walter A. Robbins, 85, Allentown, N. J., that his funeral be conducted with a fire engine rather than a hearse was granted in February. Two engines from Hope Fire Company, Allentown, were in procession, one carrying the flowers, the other the coffin. Mr. Robbins was a retired cemetery caretaker and volunteer fireman. . . . Folks of Decatur, DeKalb County, Ga., saw visions of shamrocks and shillelaghs as Chief Mike Lynch of the DeKalb County Fire Department strutted around the County Courthouse in Decatur's famous one-man St. Patrick's Day parade. The Irish fireman was escorted by the Decatur High Band and a motorcycle escort. He got his picture in the papers, too, no less!

FALSE ALARMS

Notables

Once upon a time, it seems, Harvey Firestone, Edison, John Burroughs and Mr. Ford were traveling through West Virginia, when one of the lights on their car went out, and they stopped at a crossroads store near Buckingham to get one. Mr. Ford went into the store to make the purchase.

"What kind of automobile lamps do you have?" he asked.

"Edison," replied the merchant.

"I'll take one . . . and you may be interested to know that Mr. Edison is in my car. By the way, we need another tire. What brand do you have?"

"Firestone."

"That's fine. Mr. Firestone is in my car, too, and I am Mr. Ford . . . Henry Ford."

"So?" exclaimed the dealer, going out to put the tire on the rim. While he was working John Burroughs, with his long white beard, leaned out, and said: "Good morning, sir."

The dealer looked up. "If you tell me you're Santa Claus," he exclaimed, "by the Lord Harry, I'll crown you with this wrench!"

THOS. F. MITCHELL in *Miami Herald.*

Sharpshooting

One of the greatest marksmen of the FBI was passing through a small town, and everywhere he saw evidences of the most amazing shooting. On trees, on walls, and on fences there were numberless bullseyes with the bullet hole in the absolute center. He asked to meet the person responsible for this great marksmanship.

The man turned out to be the village idiot.

"This is the most wonderful marksmanship I have ever seen," said the FBI man. "How in the world do you do it?"

"Easy as pie," said the village idiot. "I shoot first and draw the circles afterward."

"I'm sorry to keep you waiting, but I've been setting a trap for my wife."

"Good heavens, man, that's bad. Whom do you suspect?"

"A mouse in the kitchen."

Businessman: "I'd like to place an ad offering $700 reward for the return of my wife's pet cat."

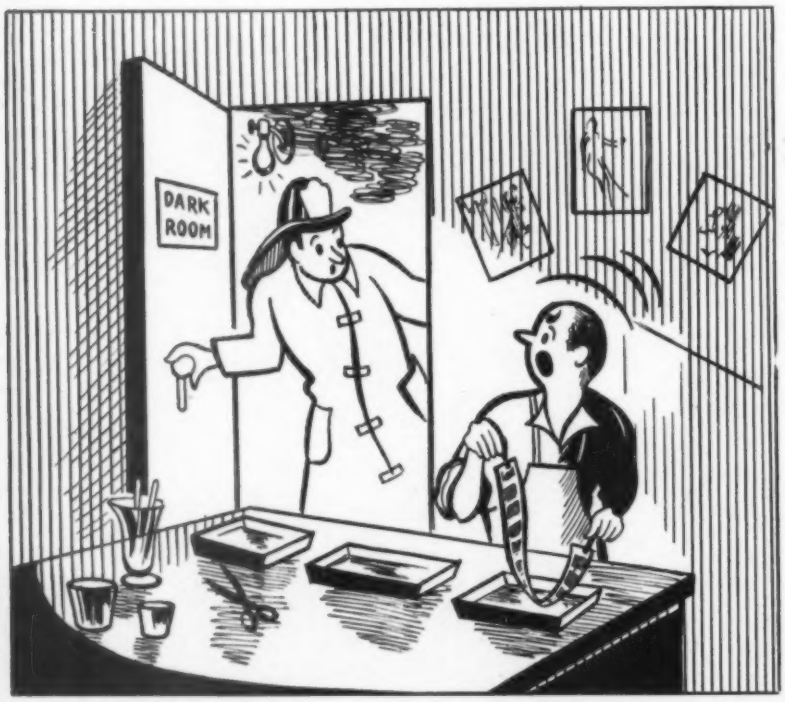
Ad Clerk: "That's a mighty big reward, sir, for one little old cat."

Businessman: "Not this one. You see, I drowned it"

Paid for Two

A certain gentleman always avoided the smoking car when he commuted—couldn't stand smoking himself, and didn't like to see other people smoke. He found a seat in a non-smoking car one day, but to his dismay a man came in, sat facing him, and lighted up a big, black cigar.

Not wishing to make a scene, the first man waited till the conductor came around to punch their tickets. As he handed his ticket to the conductor, he nudged him and nodded to the brazen smoker. The conductor nodded back, took a second punch out of the ticket, and went on.



"Shut That Door! You're Ruining the Best Film I've Shot This Year!"

Inflated

Doris, a six-year-old child from New York's East Side, was visiting in the country. The farmer's wife took Doris for a tour around the place. She showed her the garden, the chickens, the stables, and finally they arrived at the pig-pen where an enormous sow reclined in the sun.

"Big, isn't she, Doris?" said the farmer's wife.

"And no wonder," Doris replied. "I saw her yesterday and she had 10 little ones blowin' her up!"

In Red Bank, N. J., a busload of soldiers heard a female voice ask the driver: "Will you wait a minute, please, while I get my clothes on?"—twisted their necks out of joint, saw a laundress lift aboard a load of linen.

At the stroke of twelve the irascible father stomped to the head of the stairs and shouted in the direction of the living room:

"Young man, haven't you a self-starter?"

"Don't need one as long as there's a crank in the house," came the reply.

Lecturer: "If I've talked too long, it's because I forgot my watch and there's no clock in this hall."

Voice from the rear: "There's a calendar on the wall behind you."

MacTavish stepped into the taxi and said, "Waterloo Station, my mon."

The driver quickly sized up the fare as a stranger in London and for three hours drove him all over the city instead of directly to his destination.

When he finally came to Waterloo Station MacTavish darted up to a policeman and inquired: "Officer, what is the taxi fare from Euston to Waterloo?" The bobby told him.

"Would you mind paying the driver?" MacTavish asked, giving the policeman the exact sum. "I've a train to catch." and with that he disappeared into the station.

Wear-and-Tear Dept.

A middle-aged woman lost her balance and fell out of a window into a garbage can, and the Chinaman passing by remarked: "Amelicans vely wasteful. That woman good for ten years yet."

A busy engineer was using the telephone. "I want Central double-two, double two," he said.

"Two-two, two-two?" repeated the exchange girl reproachfully.

"All right," said the engineer, patiently, "you get me the number and we'll play train later.

ANSUL

We Welcome the Endorsement, *by* Other Leading Fire Extinguisher Manufacturers, *of* Dry Chemical Fire Extinguishers

FOR CLASS "B" AND CLASS "C" FIRES

ANSUL respectfully acknowledges the supreme tribute paid it by other leading fire extinguisher manufacturers who have recently entered the dry chemical fire extinguisher field.

ANSUL CHEMICAL COMPANY

Pioneers in the Research and Development of Dry Chemical Fire Extinguishers

FIRE EXTINGUISHER DIVISION • MARINETTE, WISCONSIN

World Wide Fire News

By Roi B. Woolley

Priceless Relics Lost in Oxford Fire

Fire has robbed England of still more of her remaining historical relics. The fellows (undergraduates) library, of historic Oriel College in Oxford, was swept by fire March 7, which destroyed priceless manuscripts and relics.

Only a "living chain" of students, Oxford University dons and servants stretching from the senior commons room of the library, saved other irreplaceable paintings and silver, it is said.

A complete inventory of the destroyed items was not available immediately, but authorities said that "two very ancient terrestrial globes" had been ruined, with 'relics of Cardinal Newman and Colonizer Cecil Rhodes."

* * *

3,000-Mile Guided Missiles Test Range

A bill authorizing $75 million to set up a 3,000-mile range for testing guided missiles has been approved by the House Armed Services Committee.

Guided missiles is the term for "an unmanned vehicle moving above the earth's surface in a path that can be altered by internal mechanism." According to the manner of launching, guided missiles are classified into "surface-to-surface," "surface-to-air," "air-to-air" and "air-to-surface." A "surface-to-surface missile is one like the German V-1 or V-2 which was launched from France and landed in England. An air-surface missile is launched from an airplane against a surface target. The other terms explain themselves. Ordinary bombs are not considered guided missiles, it is said, because they contain no internal mechanism which directs their flight.

With a guided missile there is a motor or propelling mechanism which prolongs the flight, so that the range is far greater than that of an artillery shell. The internal mechanism is controlled from the ground by radio. There may also be a kind of television "eye" which "sees" the target and steers the missile toward it. Supersonic speeds reduce the possibility of successful defense.

No such guided missile is available today, according to Dr. Karl T. Compton, scientist in this field, but one would be devised if a test range of sufficient length is made available. In short, the missiles sent must be detected and even recorded by receivers on the ground.

When the furiously combustible fuel (even without bomb load) of the guided missile is considered, together with the hazardous possibilities of such flying destruction, should they stray from the straight and narrow test range, the fire service may have another "atomic age problem" on its hands.

Testing missiles on a 3,000-mile long range need not be so dangerous as it seems, Dr. Compton explains. "They would not be loaded with explosives. From a safety standpoint, he says, missiles will be no more dangerous than a conventional airplane flying overhead. He did not attempt to envisage what might happen should one of these 3,000 to 5,000-mile-an-hour flaming comets rip into a community.

* * *

Many Casualties in German Explosions

Reports placed the number of dead at 41 following an explosion in a powder factory near Bautzen, in Soviet occupied Saxony, on March 11. In another explosion near Brunswick, Germany, on the same date, the dead were set at 13 and injured at 68.

The heaviest loss of life occurred when the Goda factory, which manufactures powder for Soviet occupation authorities, exploded. The other blast occurred in a British scrap iron dump when a heavy metal ball dropped on heaps of metal castings in order to crush them for handling. The officials conjectured that an explosive charge was among the scrap.

* * *

Red Hot Nails Raise Hob in Road Fire

British fire fighters have their highway fires no less than their American cousins, as witnessed by an episode at Headington, near Oxford, on January 1.

A lorry, as they call 'em in the tight little isle, containing several tons of nails, overturned and caught fire. The nails, many of them red hot, were scattered over the road and a "tyre" of the water tanker from the Oxford Fire Brigade was punctured when that rig pulled up at the blaze. Firemen's feet also suffered, when the hot nails penetrated their footgear, it is reported.

Firemen, police and volunteers shovelled nails from the crown of the roadway but, it's said, despite this, punctures

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occurred to the "tyres" of motors and bicycles the following day.

* * *

Hot Off the News Ticker

Two fire trucks sped to London's East End on April 12. One of them shot its extension ladder 100 feet skyward. A fireman mounted it and rescued a wild duck which had become entangled in a telegraph wire. . . . A woods fire silenced the Voice of America overseas radio program for forty minutes the night of March 28. Station WRUL near Scituate, Mass., went off the air when flames came close to several high-voltage transmitting towers. The station was undamaged. . . . Laszlo Topajcsek, stockkeeper of a warehouse near Budapest, was sentenced to death and immediately executed as a result of an outbreak of fire there March 31. According to a communist organ, a preliminary investigation indicated that the fire, which did only $10 worth of damage, was due to negligence of the stockkeeper. The Budapest Criminal Court decided that Topajcsek had purposely set the fire. . . . Five or six atomic bombs, each with twice the destructive power of the weapon that was dropped over Hiroshima, would easily "knock out" Detroit, according to Commissioner Donald S. Leonard of the Michigan State Police. . . . When a Waco biplane, being tested over Long Island, failed soon after a takeoff, the pilot made a forced landing on Park Boulevard, Massapequa Park, L. I. The pilot was unscathed but a lot of folks were plenty scared. . . . In Boston, even the President's bunting, prepared for his planned gala entry into that city, must come down if the fire prevention division says so. . . . A black powder time bomb blew off the front of a school building under construction near Washington, Ill., on April 6. Damage to five-room concrete block structure estimated at $45,000. No fire—no motive given. . . . A coroner in Birmingham, England, decided that John P. Gibbons, 63, was killed by an explosion inside his body during an operation. The coroner said anesthetic gas in the cavity left by removal of one lung was touched off by an electric needle in the hands of the surgeon. The blast which followed killed the patient. . . . An estimated $3,000 damage resulted March 16 from a fire on a small farm outside the town of Fairfax, Va., Fairfax County. Police said the fire broke out in a Rolls Royce sedan parked in a garage. The fire spread to an adjacent Ford, burned the garage building and a frame hennery. Fords and Rolls never did get on well together! . . . Looking at the wooden shoring and other timbers, shown in the pictures of repairing the East Room of the ailing White House, prompts the question: has that woodwork been flameproofed? Here's hopin'. . . . Fire damaged the 37-room Rochester, N. Y., mansion formerly occupied by the late George Eastman, of camera fame, and now being converted into a photographic museum. The valuable collection of materials is reported to have escaped injury. Fire was controlled after the roof of the northeast wing had been badly damaged. . . . Winston Churchill stayed in bed March 30 while three engine and two ladder companies of the Boston Fire Department answered an alarm in the street below his window for a fire in a dress shop. . . . Evidently he's no "buff."

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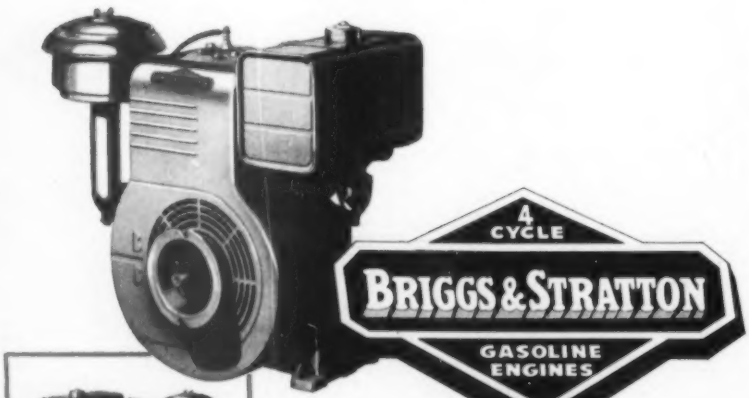

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New manufacturing processes, too, and ever-increasing precision in production and assembly are further assurance of the maximum in efficiency and performance.

Manufacturers' Announcements

New Philco Central Station Unit

A new compact central station unit for use in FM radiophone communications systems in the 30 to 44 megacycle and 152 to 162 megacycle bands has been announced by the Philco Corporation. All the essential equipment with the exception of the microphone and antenna system is housed in a cabinet, suitable for desk or wall mounting, 38" high, 25" wide and 11¼" deep. The equipment chassis are mounted on a standard size telephone relay rack which is hinged at the bottom to permit tilting the equipment forward for easy access to the rear of the chassis.

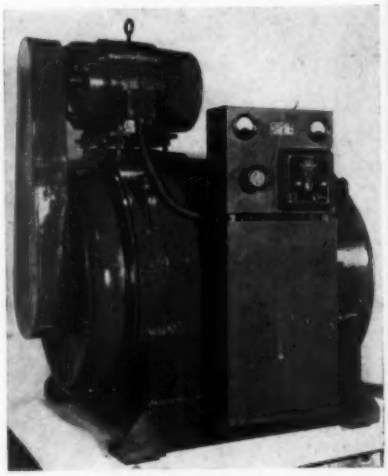
A loudspeaker and indicator lamps are built-in at the front of the cabinet.

For operation in the 30 to 44 megacycle band, there is a choice of a 30 watt or 50 watt transmitter. On the 152 to 162 MC band, the rated transmitter output is 40 watts. All of the central station transmitters employ automatic deviation control to confine the band-width of transmissions within legal and neighborly limits. Complete technical details may be obtained from the Industrial Division, Philco Corporation, Philadelphia 34, Penna.

New Series Katolight Alternators

The Kato Engineering Company, Mankato, Minnesota, have recently added a new series of alternators to their line. The new series permits a top capacity of 300 K.W. at 1800 R.P.M., 60-cycles. The new machine is available at speeds of 720, 900, 1200 and 1800 R.P.M.

The rotor is mounted on cartridge type bearings. These bearings are sealed with sufficient grease for their life; however, a grease groove in the outer rise of the ball bearing permits adding grease through a suitable grease gun fitting externally mounted.



New Kato Alternator

All rotors are constructed with damper windings to facilitate parallel operation. They are carefully banded with a steel wire to protect rotor field windings from centrifugal force damage due to moderate over speed.

The stator is made of 26 gauge coated dynamo steel with 3/8" ventilating air space for each 3" of lamination stack. Stator is held in all welded steel frame. Mounting feet are widely spaced to facilitate generator line up for coupling or belt drive. Four lifting rings are provided to permit handling by hoist. A large junction cabinet is built on outlet side providing plenty of room for making conduit attachment. The voltage regulator control panel is mounted on top of the outlet cabinet which makes it unnecessary to have an external switch board thereby reducing installation expense.

Illustration shows a Katolight 175 K.W., 60-cycle, 3 phase, 900 R.P.M., eight pole, 480/830/960/1600 volt, with overhead belted exciter, complete with panel including automatic voltage regulator, voltmeter, ammeter and exciter field rheostat.

Raymond Perry Named Federal General Sales Manager

Raymond S. Perry, formerly president of the Edicor Corporation, Chicago, has been appointed General Sales Manager, Federal Telephone and Radio

Raymond S. Perry

Corporation, Clifton, N. J., it was announced by Ellery W. Stone, president. Mr. Perry, a graduate of M.I.T., will direct all commercial activities of Federal, American manufacturing associate of the International Telephone and Telegraph Corporation.

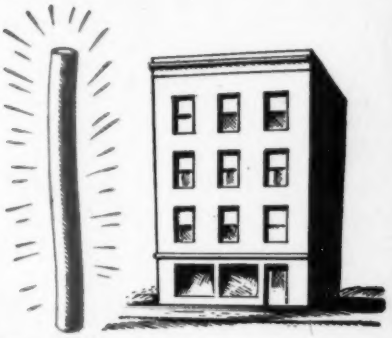
Mr. Perry was a member of the Board of Directors of the Olin Industries, East Alton, Ill., from 1943 to 1946. Before becoming president of Edicor Corp. in 1948 he served that corporation as engineering consultant. From 1931 to 1943 Mr. Perry was associated with the Ingersoll Milling Machine Co., Rockford, Ill., occupying the position of vice-president in charge of Engineering and Sales at the time he terminated that connection.

Oren Roanoke Appoints Mass. Distributors

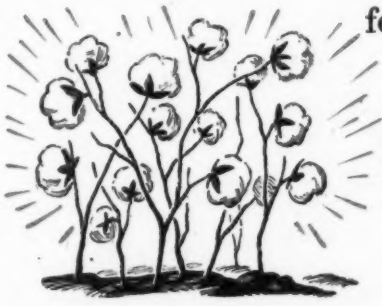
Zabek Motor Sales, Palmer, Mass., have been appointed distributors covering the State of Massachusetts, for Oren Roanoke Corporation. In addition to sales, Zabek maintains service facilities for Oren apparatus built on both commercial and special chassis, and handles a complete line of hose and equipment.

It is currently planned to display the new Oren Three Stage pumper at the New England Association of Fire Chiefs convention this summer.

If You Could Unravel...



If you could unravel a 50-foot length of 2½" paragon 3-ply multiple woven fire hose (about the height of a four-story building), you would find that 10,993,920 inches* of premium quality No. 12 cotton yarn



(approximately 173½ miles) is used in its construction.

It is the manner in which this premium quality yarn is used in making Multiple Woven and other types of Eureka Fire Hose that guarantees long life and dependable service. Every length is Balanced-Woven under suspended weight tension—antiseptically treated with mildew-repellent Formula X—rubber-lined with bomb-tested, laminated-plied safety tubes. You can depend on Eureka.

*This is the correct answer to the guessing contest conducted by Eureka at the IAFC Diamond Jubilee Convention in Miami, November 9-12, 1948.

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Hospital Fire

(*Continued from page* 344)

Other states already have taken the lesson of Effingham to heart and are researching codes, speeding up inspections and strengthening the hands of the authorities responsible for making inspections and enforcing regulatory measures.

Conclusions

The catastrophe demonstrates once again the hazards peculiar to this type of occupancy and of the need of adequate safety measures to prevent fire and panic and, if fire should eventuate, of minimizing its threat to life and property.

Obviously, the main building of St. Anthony's Hospital was anything but "fireproof," as some published reports stated. Contrary also to some accounts, it had no "fire protection system" other than the usual first aid appliances, standpipes and hoselines. It was unsprinklered, and had no automatic smoke or fire detection systems.

The type of construction was such as to require the removal of patients from the building in case of fire. In the modern hospital with approved safety measures, patients may be removed from an area involved to one not involved, without leaving the building.

There were no stops and cut-offs to prevent vertical and/or lateral extension of fire, smoke and gases from floor to floor and wing to wing. Approved fire safety measures in hospitals call for "all floor openings such as stairs, elevator and dumbwaiter shafts, laundry chutes and similar vertical openings" to be "continuously enclosed in all stories by fireproof walls or partitions, with approved fire doors . . . at the enclosure openings;"[9] this practice was not followed at St. Anthony's. The long open hallways and the blind spaces beneath the roof had no fire stops.

Fire exits and escapes—with the exception of the exterior enclosed chutes, were not of the type to facilitate removal of non-ambulatory patients. Not one of the five fire escapes appears to have been used, either by hospital staff or rescuers from the outside, yet one exterior fire escape led directly to the nursery where all but a few of the children perished.

Contrary to accepted practice, there was no means of direct communications between hospital and the fire department. There was no fire alarm box either within or on the exterior of the building.

There was a delay in locating the fire, and reporting it to the fire department. The evidence indicates the recommended procedure of notifying the fire department first—before any others—was not followed.

The staff of the hospital was inadequate in numbers and in preparation to meet a serious night fire emergency. There was only one male attendant available immediately to fight the fire and/or direct rescue operations. Nor does there appear to have been any drills held by the staff and fire department.

The fire indicates once again, the importance of locating hospital attendance records in a place safe from fire, further, of the need of some form of indestructable personnel identification.

Outside the hospital, fire control facilities were little better.

The Effingham fire department is deficient in communications, rescue and fire fighting facilities, notably ladder and other life saving equipment. No effective streams appeared to have been operated on the fire in its earlier stages. Just how much the limited water supply in the area contributed to this is not known at this writing, but it is determined that no streams from turrets or ladder pipes were used. All fire fighting operations were conducted from the exterior.

Fire department personnel was inadequate in number and preparation to meet such an emergency at least in the earlier, critical stages. Therefore its efforts to control the fire and localize it to the section in which it started were apparently, of necessity subordinated to rescue operations.

There appears to have been no predetermined plan for fighting a fire in the institution and for the calling of outside aid by the fire department, and its employment in such an operation. When help was finally requested by the police the nature of the assistance wanted was not specified. Whether or not the aerial ladder from Mattoon (27 miles distant) would have changed the picture is problematical. However, no ladder or rescue units were asked for.

The breaking of the stem on a strategically important fire hydrant at the outset of the fire, necessitating reloca-

[9] "Fire Prevention and Protection as Applied to Hospitals," National Board of Fire Underwriters.

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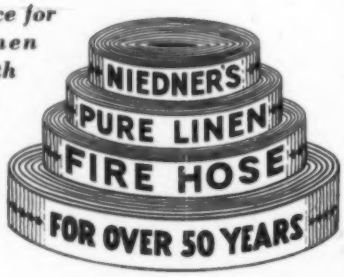

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tion of the first 750-gallon pumper (on which was carried badly needed ladders), was unfortunate.

It is understood periodic inspection of the hospital premises was not undertaken by the fire department. Representatives of the state fire marshal's office had at times made inspections and recommended certain improvements which, it is understood, were made.

Persons in the News

Former Chief J. M. Duncan a Councilman

Former Fire Chief James M. Duncan, Jr., of Alexandria, Va., who retired from active service as head of the Alexandria Fire Department two years ago, ran as a candidate for City Councilman in the April Democratic primaries and was elected. —IRVING JOHNSON

Chief L. Hutchinson "Man of the Year"

Fire Chief Lea Hutchinson of the Simsbury, Conn., Volunteer Fire Company was chosen "man of the year" by the Simsbury Rotary Club. He has headed the company since 1944 during which time the unit has grown from 10 volunteers to 35 regulars and 15 reserves. A new $80,000 fire house is under construction.

Chief McGinley Retires

Charles A. McGinley, chief of the East Orange, N. J., Fire Department since February 15, 1927, retired fifteen years later on March 15, 1949.

He had been a member of the fire department since March 15, 1907. The retiring popular head of the department was advanced to lieutenant on May 12, 1910, to captain March 1, 1912 and ten years later, was appointed chief. During his career he attended the New York Fire College, the Fire Administration course at Rutgers University and the Chemical Warfare schools at Edgewood Arsenal and Columbia University. Under his administration the fire department reached a high point in efficiency.

Chief McGinley is an active member of the International Association of Fire Chiefs and has served on many of its committees and appeared on many of its educational programs. He has also served the Paid Fire Chiefs' Club of New Jersey as president.

The outgoing chief was feted by several hundred associates and friends at a testimonial dinner on April 5, 1949, at Pierre's Restaurant, East Orange.

Baldwin New Chief of East Orange

Thomas W. Baldwin, who since May, 1939 has been Assistant Chief of the East Orange, N. J. Fire Department, was appointed to Chief on March 29, 1949 to succeed retiring Chief Charles McGinley.

The new Chief was born in East Orange and joined the fire department on April 16, 1923. He was promoted to captain in June, 1931 and to Assistant

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FIRE APPARATUS ROLLING WITHOUT THIS ALL-PURPOSE TOOL CHEATS THE CITIZENS, THE FIRE CHIEF AND THE FIREMEN WHO DO THE WORK.

Chief CHARLES A. McGINLEY, East Orange, New Jersey, before he retired equipped every company in his department with these tools, in order to give the men he trained and loved "THE VERY BEST", for fire-duty!

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Chief eight years later. He has served in all branches of the department—engine, ladder and rescue units.

Chief Baldwin has been active in fire college training. He attended the Rutgers University fire administration courses and graduated from the Institute for Training in Municipal Administration in 1936. He attended the Chemical Warfare Schools at Edgewood, Md., in 1940 and Columbia University in 1941. During the war he organized and trained the East Orange auxiliary fire fighting forces.

Chief Baldwin's pet hobby is radio and he operates his own short wave station under the call letters W2HYV. In 1940 he organized the East Orange Emergency Radio Club with 35 members.

C. E. Lane Fifty Years a Fire Chief

Fire Chief Charles E. Lane will be fifty years head of the Orange, Mass., Fire Department on May 1, 1949. He was appointed on May 1, 1899. At that time he was the youngest fire chief in New England.

The Town of Orange will fete the veteran at a large celebration on June 11, 1949. Chief Lane has been an active member of the New England Association of Fire Chiefs for 23 years and in all that time has missed but two Association conferences.

Port Jefferson Honors Former Chief

Holmes S. Lee, oldest active member and one-time chief of the Port Jefferson, N. Y., Fire Department, was honored March 7, 1949, with a testimonial dinner commemorating his 62 years of fire service.

More than 140 members of the department attended the dinner, held in the fire house. The veteran's sons, Clifton and Irving, the former at one time also holding the office of Chief, participated in the celebration.

Gifts were presented to the former Chief and to Mrs. Lee by each company in the department. The master of ceremonies was Archie McEwing. Honored also at the dinner was Capt. Chas. Hulse, who served with Lee when he was Chief. Seward Newcomb, Chairman of the Board of Fire Commission and others extolled the services of former Chief Lee and Capt. Hulse.

Obituaries

Harry Cavanagh Dies

Harry G. Cavanagh, 71, general agent of the American District Telegraph Company, fire and burglar-alarm concern of New York and many other cities, died April 12 at Orange Memorial Hospital, Orange, N. J., after an illness of several months. He lived in East Orange.

Harry Cavanagh, during his 45-year association with the ADT Company, became one of the most widely and popularly known figures in the nation's fire and police services. He was a life member of the International Association of Fire Chiefs and the International Municipal Signal Association. He was also

a member of the New England Police Chiefs, New York State Fire Chiefs and New Jersey State Police Chiefs Associations and of the National Fire Protection Association.

Surviving are his wife, a son, a sister and brother. Interment was in Gate of Heaven Cemetery, Hanover, N. J.

Norristown Chief Dies

Fire Chief Miles A. Riley, 50, who headed the Norristown, Pa., Fire Department for ten years, died March 22 after a two months' illness.

Chief Riley, a member of Norris Hose Company for 31 years, was appointed head of the borough fire department in May, 1939. During his service with Norristown's oldest fire company he had been president, treasurer and secretary of the Board of Directors. He served three years as assistant chief of Norris Hose before being elected to succeed Norman Server. He also headed the bureau of fire prevention. He is survived by a wife, a daughter, two brothers and a sister.

EDWARD H. SPRANGERS

Former Chief Taggert Passes

William S. Taggert, Chief of the Asbury Park, N. J. Fire Department since 1923, died in Asbury Park at the age of 57, after a long illness.

Chief Taggert led the land first-fighting forces aboard the ill-fated passenger liner Morro Castle, which burned off Asbury Park in 1934 with death toll of about 130 persons. He delivered a paper on this ship fire at the 1936 Convention of the International Association of Fire Chiefs of which he was a member.

Chief Taggert joined Asbury Park's volunteer fire fighters in 1910 and was elected chief in 1923. Two years later he was appointed chief of the city's first paid fire department. He was a veteran of World War I.

Surviving are his wife, a son and daughter.

Chief M. F. Barbour Dead

Myron F. Barbour, of Long Branch, New Jersey, died Dec. 9, 1948. He joined the Long Branch Fire Department in 1912, was elected chief in 1937 and appointed fire marshal in 1945. He was instrumental in teaching firemanship to the local department, and was widely known in the International Association of Fire Chiefs.

Phoenix Society Elects

The Phoenix Society, San Francisco's enterprising organization of fire buffs, held its annual meeting on April 18, 1949—on the anniversary of the earthquake (April 18, 1906), and elected the following officers: RA (president), Sam G. Clark; Pharaoh (vice-president), Sylvanus Farnham III; Keeper of the Fagots (treasurer), Edw. F. Patterson; Recorder, Cushman Dow; and Compilator, Stanley Sugarman.

The Society numbers 22 members, meets at dinner the second Wednesday of each month at the Alouette, 1121 Polk St., where visiting buffs are always welcome. The Recorder's address is 1340 Leavenworth St., San Francisco.

HIT OF THE SHOW

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DRY CHEMICAL
FIRE EXTINGUISHERS

Designed and developed for every industrial use . . . for in-plant protection . . . for trucks . . . busses . . . all motorized equipment. Smothers 90% of all fires *instantly* and *safely!*

Safety First presents the greatest, the most effective, the most complete line of hand portable dry chemical fire extinguishers available today!

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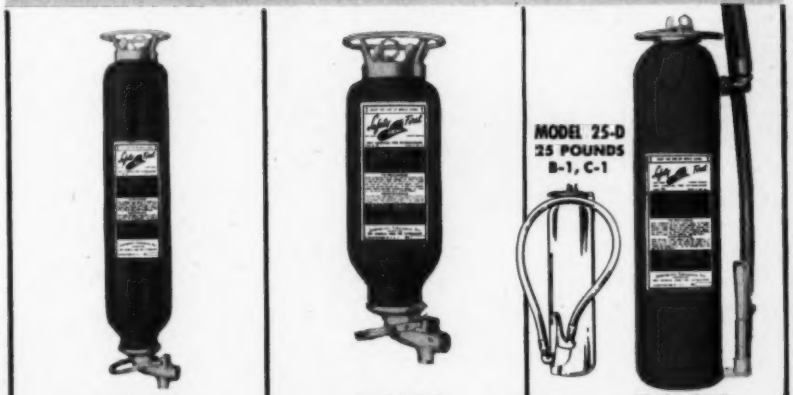

Model 10-D
10 Pounds
B-1, C-1

Model 5-D
5 Pounds
B-2, C-2

Model 25-U
25 Pounds
B-1, C-1

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FIRE PUMPS HALE CONSHOHOCKEN PA

Write today for the NEW FOLDERS on Hale Fire Pumps . . . built in all standard capacities.

HALE FIRE PUMP COMPANY

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Fire chiefs, engineers and insurance concerns are recognizing ABC's Safe T Bowl coatings as one of the most important contributions to the safety of bowlers in years. Insistence on the use of this new discovery can prevent disaster in your community. Check with local alley operators now before summer refinishing is started. Tested, approved by Underwriters' Laboratories.

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Tell us about Safe T Bowl fire-resistant alley coatings

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ADDRESS_____

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AMERICA'S BEST COATINGS, INC.
1632 No. Twelfth Street Milwaukee, Wisconsin

Correspondence

An Answer to Delayed Alarms

To the Editor:

Recently we have had several bad fires resulting in the loss of three lives and considerable damage to property. This was due to delayed alarms. The people were not familiar with the fire department telephone number.

In one case the wrong number was being called and they waited a considerable length of time before they came to the conclusion that it was the wrong number and that they were not dialing the fire department at all.

We have asked the newspapers and radios to give special publicity to our telephone number so that the citizens of Columbus will know how to call.

One suggestion has been offered, that a national standard number be used throughout the United States for calling the fire department. In my estimation that isn't a bad idea. The number suggested is MAIN 2323. With proper publicity such a number would be easily remembered and it would assist us in the fire service when it became necessary to call upon us for assistance.

Very truly yours,
WALTER G. STRICKFADEN,
Chief, Columbus, Ohio.

A Few Memories While Loafing

To the Editor:

Back in 1909 I attended a Fire Chiefs Convention in Grand Rapids, Mich. There the first motor pumping engine was placed on exhibition. It had been built by a young fire fan of St. Louis, Mo., and driven over rain-soaked dirt roads to Grand Rapids. His name was Al Webb.

Some of the chiefs in attendance were Chiefs Lemoin of Grand Rapids; Humphry of Pittsburgh; Swingly of St. Louis, and many others. None of them would even look at it. They called it a crank's dream. Only one Chief, Sam Hunter of Springfield, Ohio, would go with me to witness a test. They drove out some distance to the river bank, dropped their suction, and immediately took the water. With two lines of hose, each 300 feet in length, they threw two good fire streams. I do not recall the capacity, but we were satisfied that we had seen the coming fire equipment. When I returned to Minneapolis, I explained what I had seen to Chief Canterbury and our master mechanic, and they said, "Send out an old woman with a sprinkling can and she will do just as much good."

Very truly yours,
C. W. RINGER,
Former Chief, Minneapolis, Minn.

March Fire Losses

The nation's fire losses climbed again during March, reaching an estimated total of $67,218,000, representing a 7.7 per cent increase over February's total of $62,424,000, it is announced by W. E. Mallalieu, general manager of the National Board of Fire Underwriters.

The March total was 9.5 per cent lower than the fire losses of $74,236,000 recorded for the same month a year ago. The same trend was noted in January and February, with declines of 8.1 per

cent and 12.7 per cent respectively below the totals for the same months of 1948.

Fire losses for the year to date now total $187,568,000, an average rate of destruction of $2,084,088 a day since January 1.

For the twelve months period ending March 31, the total estimated fire loss is $689,915,000. This is a decrease of 2.5 per cent from losses of $707,540,000 for the 12 months ending March 31, 1948.

These estimated fire and lightning losses under fire insurance policies include an allowance for unreported and uninsured losses.

New Fire Safety Bills Backed in New York

New fire bills before the New York State Legislature have won support. One, the Rosenblatt-Morgan Bill, would rewrite an entire section of the law on fire protection and ventilation of cooking space in multi-family buildings in New York City. Another, the Friedman-Levine Bill, would require landlords of multiple dwellings to keep in good repair refrigerators, cooking ranges, lighting fixtures, switches, etc., furnished by owners for the use of tenants.

Another bill, introduced by Senator MacNeil Mitchell, would set up minimum standards for the protection of residents of multiple dwellings against fire and other hazards in communities under 500,000. It is the product of a three-year investigation and is said to be far-reaching in its scope.

Anybody Got a Rotary Gong?

One of FIRE ENGINEERING's perennial contributors and readers is, incidentally, a collector of fire relics.

Right now, he's specializing in gongs—fire department apparatus gongs—and particularly the old "rotary" type such as used to grace the old horse-drawn vehicles (and in some cities, ambulances).

If you've got such a gong, or know where one can be had, drop this man a line, with description and everything. You'll know the name—Peter Pirsch, Kenosha, Wis.

New York Passes Mutual Aid Act

Governor Thomas E. Dewey, of New York, has signed an Act, passed by the state legislation to amend the general municipal law by adding a new section (209-j) as follows:

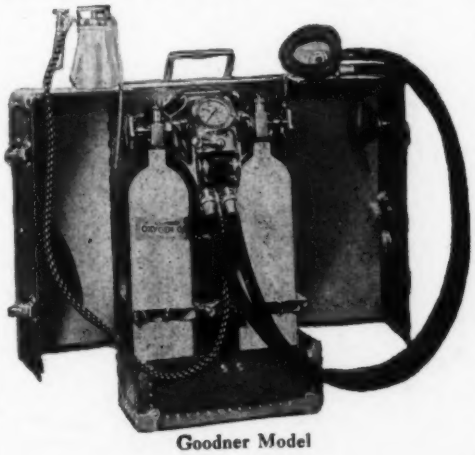
"Mutual aid for fire protection in counties. The board of supervisors in any county may appropriate and expend such sums as it may deem necessary and proper for the establishment and maintenance of a mutual aid plan for fire protection within the county and may prescribe the method of auditing or approving expenditures under any such appropriation. Expenses incurred by any city, town, village or fire district participating in such mutual aid plan for fire protection shall be a lawful municipal or fire district charge to be paid in the same manner as other like charges."

The Act became effective with the Governor's signature.

The Water Sports Season, With All Its Many Emergencies, Is Almost Here . . .

Are You Prepared?

THE STEPHENSON RESUSCITATOR



Goodner Model

is ideally suited for treating victims of submersion. This type of asphyxia is usually complicated by froth due to a throat spasm. The STEPHENSON RESUSCITATOR *instantly signals* the appearance of such froth, and provides an excellent aspirator—the first to be intermittent or continuous as desired —to remove this froth. This feature, plus the lowering of operating pressures and the mixing of air with oxygen makes the STEPHENSON RESUSCITATOR the ideal instrument to effectively cope with submersion.

Write for literature or free demonstration.

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A superior one-piece aluminum helmet in "regulation" style—light, strong and durable.

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THE "FLINT-FLEX"

The most rugged, durable "plastic" helmet made — in "regulation" style with standard front.

DROP-BRIM HELMETS in all accepted materials are also illustrated in our Catalog — together with our complete line of Firemen's Equipment.

Write for Catalog 331

CAIRNS & BRO., Inc.
ALLWOOD, CLIFTON, N. J.

For Practical Discussion of Current Fire Department and Fire Management Problems

SAFEGUARDING CHURCH CONGREGATIONS

FROM the replies received in answer to the Round Table questions, it is evident that fire chiefs give serious thought to safeguarding church schools, Sunday schools and church congregations generally from fire.

A number of departments detail firemen to attend special gatherings of children. In the main, safeguards applied to churches are the same as those required of public schools. Where there are fire codes these are generally applied to churches as well as to public schools. In some cities kindergarten classes are not permitted above or below the first floor level.

Thus far, a majority of those contributing believe public schools are better safeguarded from fire than are church schools. Some say it isn't always easy to enforce safety codes when dealing with religious groups. Also there appear to be more old, combustible church buildings in use today than there are public schools, and there appears to be more of a tendency on the part of some churches to install makeshift or faulty heating or electrical work.

In general, fire chiefs attempt to prevent the use of flammable decorations, non-approved cooking and heating appliances, etc., in churches. In some localities state laws regulate this detail, supplementing local ordinances. In a few cases there are no local laws to regulate this detail.

Fire department inspectors do visit churches and Sunday schools, and although a few chiefs have experienced some difficulty in securing compliance with their recommendations for fire safety, the majority indicate a sincere effort is made by church organizaitons to cooperate with the fire department in preventing fires and installing protective measures to control them.

Because of the generous response from our readers, this discussion will be carried over to the June issue. Readers are invited to send in their comments on the subject to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, New York.

HERE IS THE TOPIC

1. **What is the practice of your department in controlling the life hazards incidental to church schools, Sunday schools and the congregating of other large groups of children in church structures for various activities?**
2. **Do you find safeguards to life in such establishments equal to those in public schools?**
3. **Are inflammable decorations, electric appliances (motion picture machines, spotlights, etc.) and other equipment which may constitute a life hazard permitted?**
4. **Do your fire department inspectors cover these establishments in their regular tour?**
5. **Have you found that church organizations are, in general, willing to cooperate with the Fire Department in correcting hazardous conditions?**

Discussion of the Question

F. J. Wells, Chief, Fargo, N. D.: Generally speaking, our churches as a whole assume their responsibilities towards the safety of their children during Sunday School classes.

On different occasions we have placed firemen on fire watch duty within churches during district Sunday School meetings. This action was taken because of the increase in number of children and young people in attendance.

In Fargo, like in many other cities, when and wherever we have large groups of individuals in attendance at different types of meetings, tournaments and seasonal occasions, we always have firemen on fire watch duty.

Along these same lines, whenever our hotels are filled to capacity because of the above mentioned occasions, we have firemen go through the different hotels on a regular roaming inspection schedule during the night.

These nightly tours of inspection by firemen not only increase the overall safety factor of our hotels during periods when hotels are filled to

capacity, but also have proved to be a builder of good public relations. At first when these inspections were started two years ago, the hotel people did not particularly like the idea. However, during this last winter when our hotels were filled to capacity, different managers of hotels called up to ask us to have our firemen make night inspections. By their own statements, they have found conditions within their hotels improved because of firemen going through on tours of inspection. Comments from their house guests proved to the hotel managers that they not only approved of such action on the part of the fire department, but that they appreciated the thoughtfulness of the hotel managers for their safety during periods when the hotel was filled to capacity.

In Fargo, I feel the ratio is about six to four in favor of the public schools as having the best overall safeguards. When the type of construction, exits, number of individuals, supervisory personnel and general factors of safety of the two types of occupancies, are considered, it is felt our public schools are above the churches.

City codes and ordinances appear to be taking care of the matter of flammable decorations, electric appliances and other equipment which may constitute a life hazard.

Fire department inspectors not only make regular inspections, but all churches and schools are given special inspections ending with a full and complete report of our findings plus a set of recommendations for corrections felt necessary.

To date we have nothing but words of praise for the type of cooperation we receive from church officials.

Church officials have not only worked for their own benefit by carrying into completion our recommendations, but have been above average in their efforts towards helping to make Fargo a cleaner and safer city.

Two of the sixteen members of our Fire Prevention Committee of the Senior Chamber of Commerce are members of the Fargo Ministerial Association.

Churches have been very active in our spring clean-up and fire prevention campaigns.

Thomas M. Lane, Chief, Alameda, Cal.: We see that all safeguards in regard to fire safety are strictly adhered to by those whose responsibility they are intrusted to, such as local and state laws and any special regulations or orders from our Fire Prevention Bureau, relative to the hazards involved. Where there is any doubt in our minds that these will not be followed through to their entirety, we detail a policeman or fireman to the scene of the affair.

The safeguards to life are equal in importance in both schools and churches, and are treated as such by our Fire Prevention Bureau.

Flammable decorations are prohibited by State laws and all other non-approved equipment is prohibited by local ordinances.

Our fire department inspectors conduct regular, also special, inspections of these places of public assembly, and fill out a written card of all findings in such inspections.

We have always had fine coopera-

IN DARKNESS, DANGER AND DISASTER

Redesigned to FIRE DEPARTMENT SPECIFICATIONS

WHEAT FIREMAN'S SPOTLIGHT

2,500 FOOT BEAM — 25,000 CANDLEPOWER — 1,000 HRS. OPERATION

ALL AT LOWER COST

- HANDSOME CHROME PLATE
- PROTECTIVE LENS GUARD
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- WEIGHS ONLY 95 OZS. COMPLETE
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FIREMAN'S RED BATTERY CASING OF NEW HIGH IMPACT RUBBER PLASTIC COMPOUND

BUILT-IN WINDOWS INDICATE SOLUTION LEVEL — WATERPROOF SWITCH

STATE OF CHARGE EASILY DETERMINED

RECHARGEABLE BATTERY CAN BE REPLACED BY TURNING THREE SCREWS ONLY

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STANDARD CHARGERS ALSO INCLUDE SINGLE AND MULTIPLE UNITS FOR CONNECTION TO 115 VOLT 60 CYCLE

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FOR ADDITIONAL INFORMATION ON WHEAT FIREMAN'S SPOTLIGHT ACCESSORIES AND ECONOMY OF OPERATION, CONSULT YOUR DEALER OR WRITE

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FIRE CHIEFS SAY—

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PROGRESSIVE CHIEFS are now looking to automatic fire detection for the true answer for stopping the increase in fire losses.

ATMO is the famous "Rate of Rise" system that automatically calls the fire department and sounds the alarm within seconds when fire starts.

The ATMO System is approved by

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ATMO ACTS in SECONDS to STOP FIRE

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Model 20 SIRENLITE—a powerful siren combined with an automatically flashing red light.

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Complete Line of Siren Equipment Available. Bulletin on Request.

THE STERLING SIREN FIRE ALARM CO., INC.

58 Allen St., Rochester 6, N. Y.

tion from churches as well as other organizations in regard to fire and safety.

W. K. Moore, Chief, Yakima, Wash.: Our practice in controlling the life hazards incidental to church schools, Sunday schools, etc., is the same as that for public schools and other places of public assembly. Our Fire Code provides for the same safeguards in all places of public assembly. We endeavor to rigidly enforce these safeguards which prohibit the use of flammable decorations, electric appliances and other equipment which may constitute a life hazard.

Our inspectors do cover these establishments in their regular tours and our records show splendid cooperation on the part of church organizations.

D. E. Littleton, Chief, San Bernardino, Cal.: No kindergarten classes are permitted above or below the first floor. Overcrowding of class rooms is not permitted. We insist that all exits, aisles and corridors be kept clear of obstructions at all times. We also insist that proper heating facilities be maintained and that first aid fire appliances be installed.

We do not find that safeguards to life in church establishments are equal to those in the public schools. Our inspections reveal that churches will install faulty heaters, connect them with rubber hose and provide no wire guard or protection around the heaters until such safeguards are recommended by this department.

We do not permit the use of flammable decorations or of equipment which might constitute a fire hazard. This is in accordance with city and state laws.

Church establishments are inspected regularly by inspectors. No previous notice is given when inspections are to be made.

We have always found church organizations most willing to cooperate. In fact, we are often called into conference to settle their problems.

Charles B. Kuhl, Chief, Sioux City, Iowa: We don't control the life hazards of churches other than by our regular inspections unless a complaint is submitted to the department.

We do not find safeguards to life in such establishments equal to those in the public schools.

We prohibit the use of flammable decorations if we know they exist. A small portable home movie may be used and we discourage the use of candles as much as possible in any church service.

Our fire department inspectors cover these establishments in their regular tours, but not while services are being conducted or when gatherings are held within the church.

We find most church personnel cooperative.

Edward Joseph Page, Chief, Madison, Wis.: It is the practice of this department through its Fire Prevention Bureau to treat such schools as any other public or parochial school and as such to require conformity with the local and state building codes in the matter of exits, fire extinguishers, isolation of heating plants, etc.

Usually such occupancies are not as well safeguarded especially in the construction of buildings used for such purposes. This is usually not a seri-

ous condition because of the small number of occupants and the short time in which they are in the building. However, minimum standards of safety are required in conformity with existing codes and ordinances pertaining to such occupancies.

Motion picture machines are permitted to a limited extent, since these are of a portable type which are used in many classrooms of regular schools. To date, we have no ordinance regulating the use of other than permanently installed machines such as are used in theatres.

Flammable decorations are not permitted for use in any circumstances.

Inspections are made four times yearly within the fire limits, twice yearly outside these limits.

We found that church organizations are, in general, willing to cooperate with us in correcting hazardous conditions.

Walter L. Hydaker, Chief, Lima, Ohio: Our Fire Prevention Bureau has made thorough inspections of all church structures during the past four years. Orders have been placed where violations were found to exist, and we have followed up to see that these orders were complied with. Recommendations have been made to limit the seating capacity where we found overcrowding to exist.

Churches seemingly are not aware of the basic requirements for the safety of their congregations as set up by the National Board of Fire Underwriters.

No flammable decorations are allowed, and we try to eliminate all dangerous practices wherever possible.

The members of the fire department annually inspect all church structures in their districts.

When violations are brought to their attention, we find that they are willing to cooperate as far as their finances will allow. Sometimes it takes a year or so to secure full compliance, but as a whole, their cooperation is satisfactory.

J. C. Fitzgerald, Chief, Asheville, N. C.: We have made a practice of requiring our churches to have the same escapes and other fire safety instruments that are necessary to schools and other places of public gatherings.

We have attempted to make these institutions as safe as our schools. A number of difficulties are encountered since we have many old church buildings and new additions or changes make it a very expensive matter.

We do require fireproofed decorations; the electric appliances must have the Underwriters' Laboratories seal upon them, and all other equipment is checked regularly to see that it does not constitute a fire hazard.

The inspector covers all churches and church educational buildings within the city. These inspections are regularly conducted and designed to cover the area twice a year at least.

We find that all churches are very cooperative and during Fire Prevention Week we have made a practice of asking the pastors' help in the various churches in making our work known to all our citizens. We ask them to help in making the appeal to the citizens for a year round fire prevention week.

Champion Fire Apparatus

Champion Fire Pumps

NEW 44-PAGE BOOKLET

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Here's the modern extinguisher with a host of fire-fighting features. It's easy to use . . . just one trigger-touch sends snowy CO_2 deep into the fire . . . smothers it in split-seconds. Randolph is non-toxic, no damage to equipment. Does not freeze, deteriorate, or conduct electricity.

Build a successful *part-time* business as a Randolph Dealer. Sell the nationally advertised Randolph Extinguishers used by leading industries everywhere. Write for your full or part-time Dealership Plan *now!* The same plan that is bringing big profits to scores of other firemen. Qualify for an *exclusive* territory by acting . . . TODAY!

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"ALL-OUT"

DRY CHEMICAL FIRE EXTINGUISHER

EASIER TO HANDLE — lighter in weight by 7 to 15 lbs.

FASTER IN ACTION — 10′ x 10′ pit of blazing gas and oil *all out* in seconds.

PENETRATES CREVICES—completely blankets wide area.

ELIMINATES RE-IGNITION—works in winds and drafts.

NON-TOXIC, NON-CORROSIVE — harmless to everything but fire—including food.

SAFE ON ELECTRICAL FIRES—non-conductive.

FAN SHAPED NOZZLE — ejects flat stream; screens off flame from burning material; safeguards operator.

Only "ALL-OUT" gives *all out* protection. Demonstration anywhere, anytime. Write today for illustrated data.
Model A-16 illustrated, has 15 lb. capacity Model B-10 contains 10 lbs of dry chemical.

Protects the operator as it kills the fire.

Distributors' inquiries invited.

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2 PARK AVENUE, NEW YORK 16, N. Y.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of April, 1949.

Month Ending April 30, 1949

Cumberland, Md.—Cumberland Country Club, Baltimore Pike, destroyed.
Sebawaing, Mich.—Summer home of John C. Stanulis and Andrew Obleck, destroyed.
Montreal, Que.—Polish War Veteran Bldg. destroyed. Firms suffering loss were Little Alice Garments, Imperial Belt Co., Domaine Fashion Co., Art Metal Picture Frame, Ltd., Designing Centre Reg'd., K. & G. Cloak Co., Ltd., and Hudson Brand Clothing.
Gould, Ark.—Watkins Grocery and Market, W. R. Waldrop, genl. mercantile store, W. T. Reed variety store and local Post Office, destroyed.
Clinton, Mich.—Irish Hills Hotel and restaurant, nine miles west, Wamplers Lake, destroyed.
Wolf Point, Mont.—Montana County machine shop destroyed.
Williamsburg, Va.—Plt. of Williamsburg Millwork Corp. destroyed.
Philadelphia, Pa.—Hygrade Bakery Co. damaged; adj. whse. of Finnaren & Haley, Inc., damaged.
Wingham, Ont.—Wingham Mfg. Co. damaged.
Lepanto, Ark.—Army-Navy supply store, Johnny's Restaurant, J. E. Murphy Hardware Co. retail store and whse., Cotton Bowl Cafe and Joe Hall's Cafe destroyed.
Helena, Ark.—Scott five-and-ten-cent store destroyed. Adj. stores of Wooten Epes Dept. store and Peoples Bargain Store damaged.
Pasadena, Cal.—National Technical Laboratories, D. and D. Cafe and McBride's Soy Food Store, damaged.
Sedalia, Mo.—Bldg. occupied by Rosenthal Dept. Store and Rice-Stix Goods Co., damaged.
Elkins, W. Va.—Two bldgs. occupied by Moore Co., destroyed.
Thermopolis, Wyo.—Cement mixing plt., Boyden dam project, 15 miles south, owned by Morrison-Knudson Construction Co., destroyed.
Arnprior, Ont.—Canadian Public Booth Co., destroyed.
Miami Beach, Fla.—Peter Barre Restaurant destroyed. Three other bldgs. damaged.
Cleveland, Ohio—Rockford Furniture Co. store damaged.
Toledo, Ohio—Toledo State Hospital dairy barn, destroyed.
Clifton Forge, Va.—Central Methodist Church destroyed.
Dodge City, Kans.—Five-story mill unit of Dodge City Flour Mills destroyed. Fire apparently started when heat from jammed conveyor belt set off dust explosion.
Philadelphia, Pa.—Dwelling of Norton Downs, Chatham Estate, Bryn Mawr, damaged.
San Antonio, Tex.—Lackland Air Force base officers' club damaged.
Colville, Wash.—Eighth Cell-Chout Lumber Co. destroyed. Faulty diesel engine.
Birmingham, Ala.—Birmingham chapter of American Red Cross damaged.
East Norwalk, Conn.—Thirty-five boats at Uhl's Boatyard destroyed; four adj. houses damaged.
Alma, Mich.—Several bldgs. on farm of Joseph Maher, 6½ miles west, destroyed.
Union City, Mich.—Grain mill destroyed.
Easton, Minn.—Farmers Elevator destroyed.
Sidney, Mont.—Occident elevator and cleaning whse. destroyed.
Albany, N. Y.—Barn on West Wind Farm, three miles south on Altamont-Delanson road destroyed.
Hayti, S. D.—Elevator No. 1 of Farmers Elevator Co. destroyed.
Ste. Florence de Matapedia, Que.—Genl. store-apt. bldg. damaged.
Zema Beach, Cal.—Malibu Trading Post destroyed.
Aurora, Ill.—Aurora Motor Sales garage damaged. Sparks from aceytlene torch.
Angola, Ind.—Shank Lumber Co. destroyed.
Detroit, Mich.—Detroit Upholstery School destroyed.
Dillwyn, Va.—Storage whse. of Burruss Land & Lumber Co. damaged.
Union City, N. J.—Moser-Kueng Lumber Co. factory destroyed.
Milton, Iowa—Two business bldgs. occupied by Andrews-Strait Hardware store, post office and Knights of Pythias hall destroyed. Adj. grocery store damaged.
Biloxi, Miss.—Hicks Battery and Seat Cover Plant damaged.
Aurora, Mo.—Frisco railroad freight house damaged.
Brentwood, Mo.—Rockwood Supermarket damaged.
Wheeling, W. Va.—Zeller's Steak House destroyed.
Burbank, Cal.—Avocado packing plt. of Calavo Growers of California, destroyed. Faulty wiring.
Denver, Colo.—National Paper Band Co., destroyed; adj. grocery store and Messick's Health Clinic, damaged. Cleaning fluid explosion.
Warsaw, Ind.—Purina-Ralston feed store damaged.
Louisville, Ky.—Rhodes-Burford House Furnishing Co. destroyed. Adj. Howell Furniture Co. damaged. Also S. S. Kresge Store damaged.
Bangor, Maine—Grandstand, paddock and parimutuel bldg. of Bangor Fair Association, Bangor Fair Grounds, destroyed.
Cleveland, Ohio—Bldg. of Heil Process Equip. Corp. damaged. Overheated oven.
Coatesville, Pa.—Barn on farm of John M. Robinson, Lincoln Highway, three miles west, destroyed.
Walla Walla, Wash.—Union Pacific Railroad Bridge destroyed. Spark from equipment.
Clifton, N. J.—Howard Johnson Restaurant destroyed. Leaky gas main.
Tifton, Ga.—Plant of Columbia Naval Stores Co., a chemical mfr. damaged.
Grand Rapids, Mich.—Whse. occupied by American Box Board Co. damaged.
Clarendon, Va.—Business bldg. damaged.
Borger, Tex.—The Smith Hotel and the Anthony store damaged.
Hillsboro, Ore.—Hillsboro hangar destroyed; also two planes.
Spokane, Wash.—Carsteins Packing Co. damaged.
Mobile, Ala.—Sears, Roebuck & Co. whse. damaged.
Baden, Ont.—Four business establishments damaged.
St. Genevieve, Que.—Lumber mill of Paul E. Labrosse destroyed, including 100,000 feet of lumber and large quantities of glue, papier mache and paper.
Blairsville, Ga.—Union County High School destroyed.
Chicago, Ill.—Hansell-Elcock Iron Works, damaged. Explosions of flammable liquid.
Burlington, Iowa—Business bldg. occupied by music shop of J. W. Pauly and Disabled American Veterans Club, damaged.
Gilmore City, Iowa—Elevator of Gilmore Cooperative Co. destroyed. Spontaneous ignition.
Waterford, Mich.—Old Mill Tavern damaged.
Ashland, Ore.—Lumber Mills, Inc. destroyed.
Elroy, Wis.—Lime mill, ten miles southeast, damaged. Furnace sparks.
Pembroke, Ont.—Drill hall (containing bldg. material) at Petawawa Camp, destroyed.
Moosejaw, Sask.—Grain elevator, Tilney, destroyed.
North Attleboro, Mass.—North Attleboro Foundry Co. damaged.
Oak Harbor, Ohio—Ottawa County Co-operative Grain Elevator destroyed.
Creston, B. C.—Dept. store and Farmers' Institute Bldg., destroyed.
Earlville, Ia.—Wendt and Lillibridge implement sales co. store damaged.
Grenada, Miss.—Bailey-Food-E-Teria, also occupied by 300-unit frozen food locker and store space, damaged.
New York, N. Y.—Row of one-story bldgs. damaged.
Portland, Ore.—Downtown office and apt. bldg. damaged.
Spokane, Wash.—F. M. Hodin auto wrecking company destroyed. Trucks damaged.
Portland, Ore.—Morrison St. bldg., Health shoe store, Western Air Lines offices, Morrison apts. damaged.
Denver, Colo.—The Scott Methodist Church damaged.
Black Diamond, Alta.—Six bldgs. destroyed.
Oakland, Cal.—Business-apt. bldg. destroyed.
El Centro, Cal.—Hangar at El Centro Naval Air Station damaged.
Middletown, Conn.—J. A. Otterbein Co., kitchen ware mfrs. and Universal Business Machine Co., both housed in factory bldg., River Road, destroyed.
Wilmington, Dela.—Dwellings U. S. Route 100, 2½ miles off Center Meeting Road, Chadds Ford area, owned by Ford B. Draper, destroyed.
East Chicago, Ind.—Apt. bldg., Indiana Harbor, destroyed.
Waterloo, Ia.—Car repair shed, owned by Illinois Central Railroad, destroyed.
New Orleans, La.—Bldg. occupied by Louis Gertler Suit Case Co. and I. Shapiro & Co. dry goods firm, damaged. Adj. Fern Supply Co., Andy Coll Broom and Shilstone Testing Laboratories, damaged.
Napoleon, Ohio—Bldg. occupied by A. & P. supermarket and Tri-County Rural Electric Corp. destroyed.
Echo, Ore.—Howard R. Williams oil distributing plt., machinery, vehicles, housing, destroyed.
Greenville, S. C.—Plt. of Dillard Paper Co. damaged.
Brantford, Ont.—Hatchery, incubators, office and storage rooms of Spruceleigh Farm, destroyed. Oil drum explosion.
Little Rock, Ark.—Langston Sheet Metal Co. plt. and two bldgs. of Toney Printing and Stationery Co. destroyed.
San Diego, Cal.—North Park Independent bldg., a weekly newspaper, destroyed.
Chesterton, Ind.—Wilbar Mfg. Plt., metal product mfrs., destroyed.

Maryville, Mo.—Four bldgs. (one occupied by dept. store) damaged.
Risco, Mo.—Risco Consolidated School bldg. destroyed. Defective wiring.
Independence, Mo.—Save-more Drugstore destroyed. Four adj. bldgs. damaged.
Blountville, Tenn.—Miller-Perry School, Fordtown, 14th Civil District, destroyed.
Parksville, Tenn.—Hydroelectric generator and bldg. at Ocoee River Dam No. 2, owned by Tennesse Valley Authority, destroyed.
Seattle, Wash.—Helen Bush School destroyed. Oil furnace explosion.
Baltimore, Md.—Store office bldg. occupied by Globus Number 2 Inc., restaurant and mfrs., clothing outlet stores and others, damaged.
Albany, Ore.—Albany Brick and Tile Co. kilns damaged.
Virginia, Minn.—Shop and whse. at Julie Mine destroyed.
Lenoir, N. C.—Lenoir Chair Co. damaged.
Cuyahoga Falls, Ohio—Redeemer Evangelical Lutheran Church damaged. Short circuit.
Messines, Que.—Farmers Co-operative Bldg. damaged. Defective wiring.
Somerville, Mass.—Mercantile block, West Somerville district, damaged.
Stillwater, Minn.—S. Dak. Farmers Cooperative elevator damaged.
Hibbing, Minn.—Albany iron mine destroyed.
Napoleon, Ohio—A. & P. grocery and offices of Tri-county Electric Cooperative damaged.
Fayetteville, Tenn.—Billiard hall and restaurant on Public Square destroyed.
Santa Monica, Cal.—Crescent Laundry and Dry Cleaning Co. damaged.
Lynn, Mass.—Lobster Whse. of Brooks & Sprague, Inc., damaged.
Warren, Ohio—Distribution plt. of Freedom Valvoline Oil Co. damaged.
Columbus, Ohio—Two business bldgs. at 41-49 East Chestnut Street, damaged.
Crooks, S. Dak.—Farmers' Cooperative elevator destroyed.
Iaeger, W. Va.—Fourteen dwellings and store in mining settlement of McDowell County, destroyed.
Alsea, Ore.—Alsea Grade High School destroyed.
Dayton, Wash.—Dayton Feed Co. damaged.
Nelson, B. C.—New school, Doukhobor community of Tarrys, destroyed. Three Doukhobor bldgs., nearby Grand Forks, also destroyed.
Lacine, Que.—Salvation Army bldg. destroyed.
Lacine, Que.—Plt. of Dominion Wire Rope & Cable Co. damaged.
Glendale, Ariz.—Evans five-and-ten-cent store damaged.
Watsonville, Cal.—Plt. and office bldg. of Schlavon & Bauer Cider Bottling Co. destroyed.
Jasper, Ore.—Hills Creek Lumber Co. destroyed.
Chicago, Ill.—Store bldg. occupied by Abrams Dept. Store, Atlas Record & Radio Store, damaged.
Elmwood Park, Ill.—Bldg. occupied by Alden's Dept. Store, Gaytime Frocks Store and Sherman Cotton Shop, damaged.
Reno, Nev.—Sierra laundry destroyed.
Rochester, N. Y.—Business-apt. bldg. damaged. Occupants included barber shop, grocery, tailor shop and restaurant.

Framingham Firemen First to Comply with State Mask Law

Selectmen of Framingham, Mass., announced that Fire Chief Leroy Trevett, of that city, led the state in complying with the new Massachusetts law requiring all fire departments to be equipped with self-contained breathing equipment by July 1, 1949.

In announcing the department's enterprise, the city's Selectmen emphasized the advantages of this type equipment in aiding firemen to fight fire more safely and quickly, by enabling them to enter smoke and gas filled buildings to locate the fire and control it at its source, and even more important, to rescue occupants of structures.

Chief Trevett early recognized the need for such equipment and immediately after the war purchased four self-contained air masks for his department. He affirms that these masks, bought in 1945, have paid for themselves many times over because they allow his firemen to enter buildings, fight the fire at its source with a minmum of property damage, and with the maximum of safety for his men. The recent additions provide two demand-type respirating units for each truck, it is reported.

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Safety is at your side when you buy *original* Aluminum Fire Ladders. Weighing half as much as hardwood, Aluminum Ladders are easier to handle, are raised more quickly with fewer men. *Original* Aluminum Ladders are stronger. Heavily riveted and built of high tensile strength aluminum alloy, they carry many times the capacity of ordinary ladders. Their corrugated rungs are secured by aluminum expansion bushings . . . never loosen, never break off.

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READY NOW — *Write for folder with photographs, specifications and prices covering our complete line of Light and Heavy Duty Fire Ladders.*

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ORIGINAL MANUFACTURERS OF ALUMINUM FIRE LADDERS

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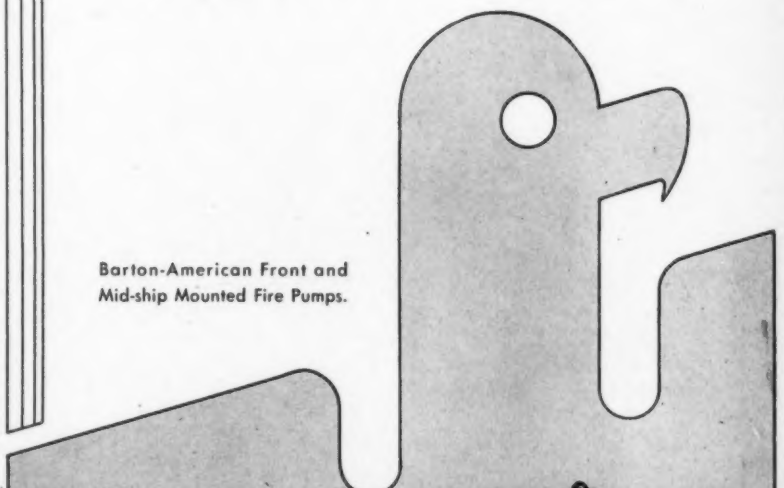

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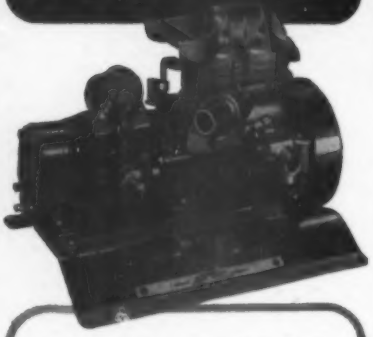
New Model 5-A
PACIFIC PUMPER



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Power plus portability! The new light weight Model 5-A is easily transportable anywhere on foot, by truck or by air. Offered with either of two size pumps for maximum volume or maximum pressure.

FOR VOLUME
Type 5-A-8

Delivers from 32 g.p.m. at 80 p. s. i. to 18 g. p. m. at 180 p. s. i. Pumps *more water* than any other equally portable, light weight unit.

FOR PRESSURE
Type 5-A-5

Delivers from 16 g.p.m. at 100 p. s. i. to 6 g. p. m. at 275 p. s. i. Where high pressure is essential, outperforms any other equally portable, light weight unit.

Features

PUMP—1" discharge, 1" suction, positive displacement type, light weight, self-priming pump, with ball bearing mounted monel shafts.

ENGINE—2 cylinder, alternate-firing type, magneto ignition, 5 h. p. at 4000 r. p. m.

Accessories and Hose

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"Multiple Choice" Questions

To the Editor:

Below are two questions given in a recent civil service examination. Please designate the correct answer a, b, c, or d, and your reason for same:

1. Carbon tetrachloride fire extinguishers usually should not be used at which of the following types of fires?

(a) A small fire in a "hot" transformer in a railroad yard.

(b) A small fire in or near a telephone pole carrying hot wires.

(c) A small fire near an electric meter fastened on the outside of a garage.

(d) A small fire just beside an electric heater in a bathroom.

2. If a Fire Lieutenant or Captain discovers that a building in his district is in danger of apparent immediate collapse he should

(a) Do nothing as it is not a fire matter.

(b) Report the matter to his superior officer and await orders.

(c) Call out the fire company and take charge of the situation.

(d) Warn all persons in the danger area and call the police to establish a safety zone.

Answer 1: Possibly the examiner had in mind the danger of the use of carbon tetrachloride extinguishers in a small room. In that case, the extinguisher should not be used in situation (d).

But here the danger is not as great as might be anticipated. For the contents of a single quart carbon tetrachloride extinguisher can be used in a bathroom without making an atmosphere which is dangerous to life. The pungency of the fumes would probably make continued occupancy of the room difficult, however.

A small carbon tetrachloride extinguisher should be effective on the transformer fire, the telephone pole fire and on the fire near the electric meter fastening. Thus it would be effective in each case. Apparently the examiner had the condition represented by (d) in mind.

Answer 2: The action of the fire lieutenant or captain would depend somewhat on local department rules and regulations. Where the immediate collapse of the building is evident, the fire officer should warn the persons in the danger area, and immediately communicate his action to his superior officer. It may be too late to wait until he got instructions from his superior officer before taking action.

It is quite similar to the case where a fire company responding to a fire discovers, enroute, another fire at which life is in danger. Here it is up to the fire officer to stop, put his company to work in saving life, and immediately notify fire headquarters what he has done, so the call can be covered by another company.

Our choice of the four conditions would be (d), although this might be counter to fire department rules in some sections of the country.

Phosgene Generation

To the Editor:

I have heard that carbon tetrachloride generates phosgene gas when applied to a fire. Is this true?

W. E. C.

Answer: Under certain conditions, carbon tetrachloride when used at a fire may generate phosgene gas. This applies particularly where the carbon tetrachloride is discharged on iron heated to a high temperature.

Within the past year, the Cook County Health Department of Chicago, Ill., ran tests on the use of carbon tetrachloride extinguishers in connection with a trailer fire, and found there was a considerable percentage of phosgene present after a fire on which the extinguishers had been used. On the other hand, there are authorities who claim that the amount of phosgene generated under ordinary conditions is negligible and constitutes no life hazard.

The fact remains, however, that phosgene is generated when carbon tetrachloride is discharged on iron heated to a high temperature, though the amount may be insignificant.

Flash Point and Ignition Point of Dowtherm

To the Editor:

Will you please give me the flash point and ignition point of Dowtherm?

T. A. G.

Answer: R. A. Lindsay of the Dow Chemical Company, Midland, Mich., offers the following information on Dowtherm.

"The flash point of Dowtherm A is 228 degrees F. and the fire point is 246 degrees F. The spontaneous ignition temperature is unknown but is above 932 degrees F. at temperature limitation on the equipment on which we attempted to determine it."

Centrifugal Pump Discharge

To the Editor:

I would appreciate what information you can give me relative to how much advantage one of the new type two-stage parallel series pumps takes of the hydrant pressure and how it

would affect the discharge. This pump is rated to deliver 750 gallons at 120 pounds net discharge pressure. Eighty per cent peak speed is 2800 revolutions; ninety per cent peak speed is 3150 revolutions and at test it has delivered 761 gallons at 150 pounds pressure, 2530 revolutions; 531 gallons at 200 pounds pressure, 2430 revolutions; 388 gallons at 250 pounds pressure, 2350 revolutions.

The pump will deliver 750 gallons at 150 pounds net engine pressure from draft. If we use the same set-up and connect to a hydrant which will maintain a flow pressure at 60 pounds on the intake gauge, what will the reading on the pressure gauge be and what would the discharge be at the same number of revolutions as the first test?

How much friction loss would you allow for the Baker Cellar nozzle with two 1-inch smooth bore openings?

G. S.

Answer: While the discharge and increase in pressure from lines supplied by a centrifugal pump operating on a hydrant at which a pressure of 60 pounds is maintained cannot be stated from the information you give, it is very likely that the hydrant pressure will be utilized to the extent of approximately 80%, so that the discharge pressure, if the pumper were creating 150 pounds by itself, would be 198 pounds, or thereabouts. One of the advantages of a centrifugal pump over a positive displacement pump is that it utilizes a larger part of the pressure delivered to it by the hydrant.

With reference to friction loss in a Baker cellar pipe, 10 pounds is usually allowed to cover this, although it will vary with the flow.

Factors for Four Parallel Lines

To the Editor:

In the Questions and Answers column of the December issue of FIRE ENGINEERING, Question 4 presents a problem of finding the engine pressure on a four parallel line layout. You solve this problem by converting to a two-line layout. However, I am able to obtain the same results by simply solving as a straight layout, using the K factor .037 which is from a table of factors for four lines that I worked out some time ago and you very kindly published in the November, 1947, issue of FIRE ENGINEERING, Page 823.

I would appreciate your opinion as to the accuracy of results obtained by the use of these factors, in comparison to results obtained by the conversion method.

The following are my factors for four lines of 2½-inch hose: for 1⅜-inch nozzle, .026; for 1½-inch nozzle, .037; for 1⅝-inch nozzle, .051; for

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1¾-inch nozzle, .067; and for 2-inch nozzle, .116.

HENRY T. HANSON

Answer: We have checked your factors against our method of solving problems involving four lines and find that the results are almost identical. In the specific problem you cite, the results as secured by your factor and by our method of solving the problem come out precisely the same.

Ontario to Aid Paid Departments

Not only members of the Canadian fire service, but those of this country will be interested in a Bill introduced in the Ontario Legislature by General Blackwell, which as this is written, has passed its Second Reading and Committee of the Whole House and only awaits the formal Third Reading. It is reported on good authority that the measure will be made law, with inclusion of a number of major amendments.

The Bill is referred to as the Fire Departments Act 1949. Part I of the measure follows somewhat the principles of the old Fire Departments Act in force in Ontario in some form since 1921 and which the Fire Marshal's Office has administered since 1944. The most important change in the new measure brings all full-time fire fighters, including officers, within the maximum 72-hour work week, which previously applied only to those in municipalities of over 10,000 population.

Part II of the Bill is the new and somewhat revolutionary section. It establishes the British system of direct grants from the central government to pay a percentage of the annual costs of municipal fire departments for operating and also for certain capital costs. This percentage varies with the size of the municipality.

The Bill lists (Sec. 12) the allowable expenditures towards which grants are to be made, and these include all normal fire department expenditures except those connected with waterworks and fire halls (provision is made among the authorized expenditures for membership in the I.A.F.C. and attendance at its regular meetings). Included also are subscriptions to technical journals and all training text books.

All grants are conditional upon a pension plan for all the full-time fire fighters on the fire department, Workmen's Compensation for both full-time and volunteer fire fighters, and the municipality being in compliance with the collective bargaining and hours of working provisions.

Grants for purchase of new fire apparatus will vary from 10% to 25% of the cost, depending upon size of municipality. Thus in the city of Toronto, the fire department would receive $294,497. Where a municipality is organizing a fire department for the first time, it is eligible for an additional 10% grant towards the purchase of a pumper (Sec. 16).

Grants are payable upon the year's costs as certified by the municipal treasurer in a statement to the Fire Marshal under Secs. 14 and 15 of the Bill.

Another important item in the Bill provides for the establishment of a central fire college for the training of fire department officers and includes under

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INVINCIBLE NOZZLES

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Just another type —one of many— made by pioneers in nozzle manufacture.

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this stature the regional fire schools and traveling instructors which, in the past, have been handled under the Fire Marshals Act. Provision is also made for regulations governing the design and type of fire apparatus and equipment.

The Act also applies to the Province police service and includes provisions for making claims for grants, payments, appeals, keeping records, etc.

The Bill gives to the Fire Marshal's Office materially extended authority and responsibilities. The present Fire Marshal is William J. Scott, O.B.E., K.C. The appropriation for his office for the fiscal year starting April 1, 1949 is $1,665,000.

Convention Dates

May 19—NEBRASKA FIRE SCHOOL. Regional meeting, Nebraska City, Neb. Director, J. I. Fetters, Asst. State Supervisor, Trade & Industrial Education, State Capitol, Lincoln, Neb.

May 23-27—ARSON INVESTIGATORS' SEMINAR. Annual meeting, Purdue University, Lafayette, Ind. Director, Professor J. L. Lingo, Public Safety Institute, Purdue University, Lafayette, Ind.

May 22-28—NORTHEASTERN KENTUCKY FIRE SCHOOL. Regional fire school, Morehead, Ky. For information contact Captain V. A. Beam, 818 Sutcliff Avenue, Louisville, Ky.

May 27-28—EASTERN ASSOCIATION OF FIRE CHIEFS. Annual meeting, York, Pa. Secretary, Charles E. Clark, Box 271, Wayne, Pa.

June 2—NEBRASKA FIRE SCHOOL. Regional meeting, Ogallala, Neb. Director, J. I. Fetters, ters, Asst. State Supervisor, Trade & Industrial Education, State Capitol, Lincoln, Neb.

June 5—NEBRASKA FIRE SCHOOL. Regional meeting, Scottsbluff, Neb. Director, J. I. Fetters, Asst. State Supervisor, Trade & Industrial Education, State Capitol, Lincoln, Neb.

June 5-8—NEW YORK STATE ASSOCIATION OF FIRE CHIEFS. Annual meeting, Syracuse, N. Y. Secretary-Treasurer, Chief Henry F. Drake, Clinton Corners, N. Y.

June 7—NEBRASKA FIRE SCHOOL. Regional meeting, Chadron, Neb. Director, J. I. Fetters, Asst. State Supervisor, Trade & Industrial Education, State Capitol, Lincoln, Neb.

June 7-9—KENTUCKY FIRE SCHOOL. Annual meeting, University of Kentucky, Lexington, Ky. For information contact Captain V. A. Beam, 818 Sutcliff Avenue, Louisville, Ky.

June 8-11—BERKS COUNTY FIREMEN'S ASSOCIATION. Annual fire school, Wyomissing, Pa. Secretary, Adam Ed. Baer, 213 S. 3rd Ave., West Reading, Pa.

June 9—NEBRASKA FIRE SCHOOL. Regional meeting, Atkinson, Neb. Director, J. I. Fetters, Asst. State Supervisor, Trade & Industrial Education, State Capitol, Lincoln, Neb.

June 10-11—BUCKS COUNTY FIREMEN'S ASSOCIATION. Annual parade and convention, Perkasie, Pa. Secretary, Clifford S. Shearer, Quakertown, Pa.

June 12—NEBRASKA FIRE SCHOOL. Regional meeting, Pierce, Neb. Director, J. I. Fetters, Asst. State Supervisor, Trade & Industrial Education, State Capitol, Lincoln, Neb.

June 13-16—NEW MEXICO FIRE SCHOOL. Annual meeting, Silver City, N. M. Secretary-Treasurer, F. W. Wynn, Hobbs, N. M.

June 13-17—SOUTH DAKOTA FIRE SCHOOL. Annual meeting, Huron, S. D. Secretary, Robert W. Hannigan, Pierre, S. D.

June 14-17—ILLINOIS FIRE COLLEGE. Annual meeting, University of Illinois, Champaign-Urbana, Ill. Secretary, Chief Roy Alsip, Fire Headquarters, Champaign, Ill.

June 14-17—MICHIGAN FIRE COLLEGE. Annual meeting, Ann Arbor, Mich. Supervisor, M. D. Whale, State Board of Control for Vocational Training, Lansing, Mich.

June 15—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting, Larchmont, N. Y. Secretary, Howard Geer, Rye, N. Y.

June 21-23—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. Annual meeting, Wentworth Hotel, Portsmouth, N. H. Secretary, John W. O'Hearn, 22 Mount Auburn Street, Watertown, Mass.

June 22-24—MARYLAND STATE FIREMEN'S ASSOCIATION. Annual meeting, Ocean City, Md. Secretary, B. R. Benson, III, 303 Bosley Avenue, Towson 4, Md.

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June 23-25—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual meeting, Fort Collins, Col. Secretary, Chief Ray Tiller, Fire Headquarters, Waterloo, Ia.

July 14-16—MONTANA STATE FIREMEN'S ASSOCIATION. Annual meeting, Butte, Mont. Secretary-Treasurer, Al LaForest, Butte, Mont.

July 19-21—CENTRAL NEW YORK FIREMEN'S ASSOCIATION. Annual meeting, Penn Yan, N. Y. For information, contact Penn Yan Fire Department.

July 20-22—MICHIGAN STATE FIRE CHIEFS ASSOCIATION. Annual meeting, Cadillac, Mich. Secretary, Chief Orie A. Hand, Fire Headquarters, Lincoln Park 25, Mich.

July 21-23—ASSOCIATION FOR FORMER U. S. NAVY, COAST GUARD AND MARINE CORPS FIRE FIGHTERS. Annual meeting, Franklin Legion Hall, High Street, Columbus, Ohio. Secretary-Treasurer, William J. Mignery, R. No. 5, Elkhart, Ind.

July 25—EGYPTIAN FIRE FIGHTERS ASSOCIATION. Regular meeting, Salem, Ill. Secretary, Victor L. Stocks, Centerville, Ill.

July 25-27—WISCONSIN STATE FIRE CHIEFS' ASSOCIATION. Annual meeting, Jefferson, Wis. Secretary, Chief Leo J. Girens, Fire Headquarters, Oshkosh, Wis.

July 25-28—WEST VIRGINIA FIRE SCHOOL. Annual meeting, West Virginia University, Morgantown, W. Va. Director, R. E. Hanna, Jr., Fire Service Extension Schools, School of Mines, West Virginia University, Morgantown, W. Va.

Aug. 1-3—WISCONSIN PAID FIREMEN'S ASSOCIATION. Annual meeting, Kenosha, Wis. Secretary, John Kromel, 717 56th Street, Kenosha, Wis.

Aug. 3—NEBRASKA STATE ASSOCIATION OF FIRE FIGHTERS. Annual meeting, Lincoln, Neb. Secretary-Treasurer, Warren F. Kensinger, 302 South Pine, Grand Island, Neb.

Aug. 8-12—PENNSYLVANIA FIRE SCHOOL. Annual meeting, Lewiston, Pa. Director, Edgar A. Spotz, Department of Public Instruction, Harrisburg, Pa.

Aug. 12-13—VERMONT FIREMEN'S ASSOCIATION. Annual meeting, Windsor, Vt. For information, contact Acting Chief Richard C. Holmes, Windsor, Vt., Fire Department.

Aug. 16-17—NEW YORK STATE FIREMEN'S ASSOCIATION. Annual meeting, Albany, N. Y.

Aug. 18-20—CONNECTICUT STATE FIREMEN'S ASSOCIATION. Annual meeting and field day, West Haven, Conn. Publicity Chairman, V. W. Lee, P. O. Box 204, West Haven 16, Conn.

Aug. 20—BALTIMORE COUNTY VOLUNTEER FIREMEN'S ASSOCIATION. Annual meeting, Maryland Line, Md. Secretary, W. A. Chenoweth, 4104 Milford Mill Road, Pikesville 8, Md.

Aug. 29-Sept. 1—DOMINION ASSOCIATION OF FIRE CHIEFS. Annual meeting, Ottawa, Ont. Secretary, Chief Allan H. Clark, Fire Headquarters, Lakefield, Ont.

Sept. 6-8—KENTUCKY FIREMEN'S ASSOCIATION. Annual meeting, Covington, Ky. Secretary, Captain V. A. Beam, 818 Sutcliff Avenue, Louisville, Ky.

Sept. 8-10—OHIO STATE FIRE CHIEFS ASSOCIATION. Annual meeting, Dayton, Ohio. Secretary, Assistant Chief Rosche, c/o Fire Department, Canton, Ohio.

Sept. 9-11—COLORADO STATE FIREMEN'S ASSOCIATION. Annual convention, tournament and fire school, Colorado Springs, Colo. Secretary, Arthur J. Becker, 4250 Stuart Street, Denver 12, Colo.

Sept. 20-21—IOWA STATE FIREMEN'S ASSOCIATION. Annual meeting and tournament, Spencer, Ia. Secretary, C. H. Fuchs, 2749 Kinsey Avenue, Des Moines, Ia.

Sept. 21—FIRE CHIEFS' EMERGENCY PLAN OF WESTCHESTER COUNTY. Monthly meeting, Pleasantville, N. Y. Secretary, Howard Geer, Rye, N. Y.

Sept. 26-29—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. Annual meeting, New Orleans, La. Secretary-Treasurer, Daniel B. Tierney, 8 Robbins Road, Arlington 74, Mass.

Oct. 4-6—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. Annual meeting, Greensburg, Pa. Secretary, Charles E. Clark, Box 271, Wayne, Pa.

Oct. 10-13—INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION. Annual meeting, Pittsburgh, Pa. Secretary, Irvin Shulsinger, International Municipal Signal Association, 11 West 42nd Street, New York 18, N. Y.

Oct. 24-28—NATIONAL SAFETY CONGRESS. Annual meeting and exposition, Chicago, Ill. General secretary, R. L. Forney, National Safety Council, 20 N. Wacker Drive, Chicago 6, Ill.

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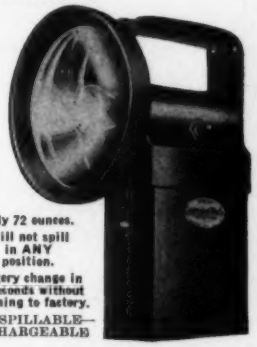

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May, 1949

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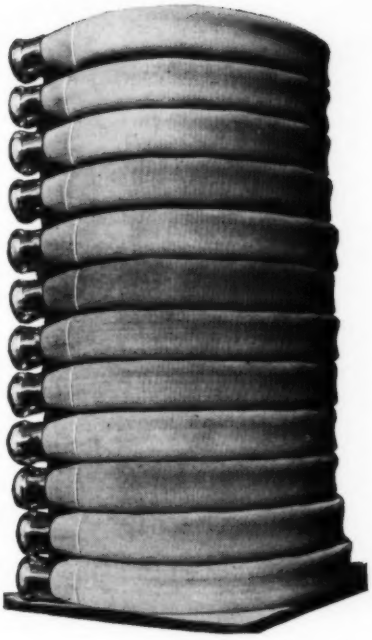

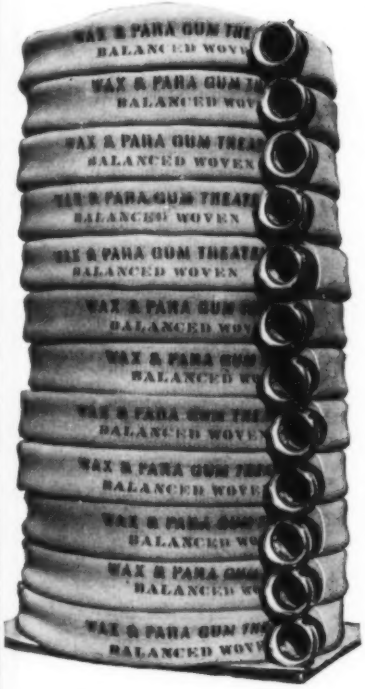

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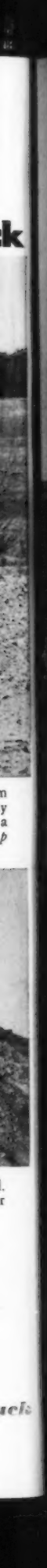
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